## THE IRON AGE SEMI-ANNUAL INDEX

JANUARY-JUNE, 1936-VOL. 137

Chilton Co., 239 West 39th Street, New York

Illustrated Articles Indicated by\*

Acme Electric & Mfg. Co.: Dielectric Tester, Feb 20 p 50

Acme Steel Co.:

Butane-Electric Switching Lo-comotive\*, Mar 12 p 53 Laboratory Type Slab Heating Furnaces\*, Feb 20 p 38 Quarterly Report, Apr 23 p 70

Agitators

Patterson UC, Feb 20 p 50

Aggregate:

Pettinos, to Withstand His Frequency Currents, Apr p 66 Pettinos.

Compressors:

Allis-Chalmers Ro-Twin, Feb 20 p 50

Air Conditioning:

In Industry\*, Jan 2 p 577 Sales, 1935, Jan 2 p 159 York Wide Range Units, Jan 30 p 42

Aircraft:

Manufacture of Airplane Struts and Use of Oxyacety-lene Flame, Feb 6 p 56 Production First Quarter, 18 p 60

Air-Hose:

New York Belting & Packing New Line, Apr 30 p 106

Separator:

Motor, for Sandblast Mask. Apr 13 p 49

Ajax Mfg. Co.:

Forging Presses w Speed Hydraulic Feb 20 p 49 with Clutch\*

Akin, Thomas R.:

Testimony in Basing Point Hearing, Mar 19 p 76

Allegheny Steel Co.:

Large Polished Stainless Steel
Sheet, Mar 19 p 52
Plans Merger with West
Leechburg Steel Co., Apr
30 p 64; May 28 p 55; June
4 p 90 Quarterly Report, May 14 p 74-G

To Erect Barge Terminal, Jan 30 p 55

Allis-Chalmers Mfg. Co.:

Air Compressor, Ro-Twin, Feb 20 p 50 Automatic Motor Base, Apr 9 p 95 To Pay Bonus, Apr 16 p 72

Alloy Steels:

ING

Castings, Manufacture in Ford Plant\*, Apr 30 p 22 Cr-Ni, Sea Atmosphere Re-sistance, May 21 p 42 Developments, 1935\*, Jan 2 p High-Strength for Construc-tion, Mar 12 p 85 High-Strength Low Alloy, Jan 16 p 22; Apr 23 p 32\*

Strength High Low

High Strength Low Alloy Structural, Trends in Metal-lurgy of, Feb 27 p 40 Manganese, Grinding Parts in Marion Steam Shovel Plant\*, Mar 12 p 46 Rustless, Production, 1935\*, Apr 23 p 22 Silmo, Timken New, May 14 p 80

p 80 Welding\*, Jan 30 p 20; Feb 13

Aluminum and Magnesium for Construction, Mar 12 p 55 Aluminum Bronze, May 14 p 74-C Aluminum, Free Cutting, Feb 13 p 63; Mar 5 p 33 Beryllium\*, Mar 5 p 28 Boride, Jan 2 p 178 Copper-Beryllium, New Data, June 4 p 95

June 4 p 95 Copper, for Construction, Mar 12 p 82 Copper, Welding\*, Feb 20 p 40

Developments, 1935\*, Jan 2 p 171; Jan 16 p 21 Nickel, for Construction, Mar 12 p 84

Aluminum:

Alloys, Screw Machine Practice for New Free Cutting, Feb 13 p 63; Mar 5 p 33 Bronze Alloy, May 14 p 74-C From Chemical Element to Industrial Metal\*, Feb 20 p

22
Production, Electrochemical
Society Celebrates 50th Anniversary, Feb 20 p 91
Pylumin Process for Coating,
Apr 2 p 42
Welding, Advances in\*, Mar
19 p 46

Aluminum Association: Meeting, June 25 p 119

Aluminum Co. of America: Annual Report, Apr 30 p 99

Amalgamated Association:

Efforts to Organize Steel In-dustry, June 4 p 74

American Brake Shoe & Foundry Co.: T-Scale Pilot Castings\*, June 18 p 26

American Broach & Machine Co.: Straightening Press\*, Mar 19

American Car & Foundry Co.: End Forging Heater\*, June 4 p 53

American Die Casting Institute: Exhibit, Apr 9 p 78; May 21 p

American Federation of Labor: Campaign to Organize Steel Industry, Feb 27 p 64

American Foundry Equipment Co.:

Electric Air Heater, May 7 p

Notary Tables for Blast Clean-ing\*, Mar 5 p 52 Wheelabrator, Blast Cleaning Equipment, June 18 p 46

American Gear Manufacturers' Association:

Convention Proceedings, Apr 23 p 73 Officers\*, May 7 p 102

American Houses, Inc.:

Steel Frame House\*, May 7 p

American Institute of Mining and Metallurgical Engineers: Convention Proceedings, Feb 27 p 22

American Institute of Steel Construction:

Awards Prizes in Bridge Design Contest\*, May 28 p 59
Booklet on Technical Merits of Steel, May 28 p 108
Bridge Design Contest, Feb 6 p 61; Feb 27 p 94; Apr 30 p 106 p 6

p 106 Fabricated Structural Steel Orders, 1935, Apr 9 p 84 Frankland, F. H., Chief Engi-neer, Jan 16 p 50

American Iron and Steel Institute:

Statistical Report, Annual Statistical Report, May 28 p 80 Convention Papers, May 7 p

Cost of Steel Industry's Re-search Program, May 14 p

Employment and Wages in Iron and Steel Industry, Jan 2 p 142
Employment in Steel Industry, 1935, May 14 p 76
European Steel Nations Protect Home Markets, Feb 13 p 97
Farm Prices Neares to Pro

Farm Prices Nearer to Pre-1929 Average Than Sheet

Farm Prices Nearer to Pre-1929 Average Than Sheet Steel, Apr 2 p 90 Finished Steel Production, 1935, May 7 p 92 Job Cost in Steel Industry, Feb 20 p 69 Men Who Make Steel, Booklet, May 28 p 82 Pig Iron and Ferroalloys Pro-duction, 1935, Mar 26 p 89 Rail Production, 1935, Apr 9 p 113

Sheet and Strip Steel Produc-

Sheet and Strip Steel Produc-tion, 1935, June 4 p 118 Spring Meeting Proceedings, June 4 p 26 Steel Bought by Motion Pic-ture Companies, 1935, Apr 9

p 85 Steel Consumption Per Capita, 1935, Apr 2 p 71 Steel Imports, Cost to American Employees, 1935, Apr 30

Steel Imports, Cost to American Employees, 1935, Apr 30 p 106
Steel Industry Earnings, 1935, May 14 p 75
Steel Industry Taxes, 1935, May 14 p 70
Steel Ingot and Castings Production, 1935, May 7 p 92
Steel Ingot and Pig Iron Capacity, 1935, Mar 5 p 86
Steel Ingot Production, December and Year, Jan 9 p 65-D; January, Feb 13 p 82; February, Mar 12 p 74; March, Apr 9 p 95; April, May 14 p 74-F; May, June 11 p 106
Steel Markets for Consumer Goods, 1935, Apr 9 p 86

Steel Output Per Family, 1935, Feb 20 p 66
Steel Products for Sale in Fourth Quarter and Year 1935, Feb 20 p 70
To Reissue Revised Freight Rate Tariff Data, Jan 9 p 62; Feb 6 p 58
Wages of Steel Workers, Yearly, Apr 2 p 69
World Steel Production, United States Share of, June 4 p 81
Year's Activities, June 4 p 49

American Management Associa-

Convention of Job Order and Mass Productions Divisions, Apr 23 p 47

American Manganese Steel Co.: Double-Wall Crane Wheel\*, Apr 2 p 52 To-Scale Pilot Castings\*, June 18 p 26

American Mining Congress: Convention Proceedings, May 28 p 78

American Numbering Machine Co.:

Portable Numbering Machine, Feb 27 p 49

American Rolling Mill Co.:

Annual Report, Apr 30 p 99; Quarterly Report, May 28 p 71

71 Stabilized Steel, May 28 p 58 Trains Workers in First Aid, Apr 30 p 68

American Society for Metals: Annual Meeting Announce-ment, Jan 16 p 58

American Society for Testing Materials:

Convention Program, May 21 Regional Meeting Proceedings, Mar 12 p 55

American Society of Mechanical Engineers: Applied Science Meeting, June

18 p 48 Birmingham Section Foundry Practice Meeting, Mar 5 p

American Sheet & Tin Plate Co.:

Consolidated with Carnegie Illinois Steel Corp., Apr 9 1 113

American Steel & Wire Co.:

Employment Representation, Plan for Closer Relation with Management, Mar 5 p 64

Wire Rod Mill at Joliet Un-der Construction, June 25 p

American Steel Foundries: Annual Report, Feb 13 p 81

American Steel Warehouse As-sociation, Inc.:

Chapter Officers, May 7 p 75 Convention Proceedings, June 18 p 40

American Supply and Machinery Manufacturers Association Convention Proceedings, May

American System of Enterprise, Jan 16 p 32; Mar 12 p 45; Apr 2 p 44; Apr 23 p 28

American Tool Works Co.: High-Speed Radial Drill\*, June 18 p 47

American Welding Society: Joint Meeting with Production Division of Society of Auto-motive Engineers, Jan 23 p Meeting of Detroit Section, Apr 2 p 66

American Zinc Institute: Annual Meeting Announce-ment, Mar 12 p 77

Anchor Post Fence Co.: Manufacture of Chain Link Bethanized Wire Fence, May 7 p 74

Angloch, M. C.: Vice-President Jones & Laughlin Steel Corp.\*, Feb 13 p 98

Antimony: Chloride, as Selective Inhibi-tor, Apr 30 p 43 In Steel Scrap, Apr 23 p 43

Apollo Metal Works: Sues City of La Salle, May 21 p 85

Apprenticeship: Progress in Detroit's Program, Apr 16 p 34

Argentina: Exchange Surtax Handicaps Our Trade with, Apr 30 p

Armstrong Mfg. Co.: Ratchet Diestocks, Mar 19 p 56

Arnott, Thomas A .: Hydraulic Bench Vise Patent, Jan 30 p 43

Art Metal Construction Co.: Steel Cases\*, Mar 12 p 61

Askania Regulator Co.: Organized, Apr 16 p 72

Asphalt Products Co.: Aspro, New Metal Finish, May 14 p 73

Aspro: New Metal Finish, May 14 p 73

Associated Oil Co.: Portable Oil Distributing Plant\*, Jan 23 p 18

Association of Iron and Steel Electrical Engineers: Convention Proceedings, Apr

30 p 45 Plans for Fall Meeting and Exposition, May 14 p 72

Athenia Steel Co.: Carbon Spring Steel Prices, Apr 9 p 93

Auger Steel:

For Eliminating Inhalation of Coal Dust, June 4 p 77 Austin Co.:

Constructing Reinforced Concrete Factory in Zero Weather\*, Apr 2 p 48

Austin, H. L.: Assistant to Chairman, United States Steel Corp.\*, Jan 23 p 54

Australia: Exports of Iron and Steel Products, Nine Months, 1935, Jan 30 p 56 Automatic Temperature Control

Relatrol, Furnace Tempera ture Controller\*, Apr 16

Automobile Industry: Trend in 1935, Jan 2 p 70 Automobiles:

Bodies, Detecting Variations in Smoothness\*, May 14 p 57 Cadillac 154-in. Wheel-Base Chassis\*, Apr 16 p 57 Costs and Wages\*, Apr 16 p 45 Axles:

Car, Machining\*, Mar 12 p 36

В

Bailey Co., William M .: New Open-Hearth Brick\*, Mar 19 p Checker

Baker-Raulang Co.: Electric Truck for Picking Up Bundles of Steel Sheets\*, Jan 30 p 35

Baldwin Locomotive Works: Quarterly Report, Apr 30 p

Baldwin-Southwark Corp.: 830-Ton Triple-Action Hy-draulic Press\*, Mar 5 p 49 Grinding Machine, Spring and Flat Surface\*, June 25 p 75 Huge Planers for Yards\*, Jan 23 p 33

Ballay and Chavy: Heat Treatment of Cast Iron, May 14 p 74-B

Continental Do-All, Mar 5 p 53 Barrett-Cravens Co.:

Band Saw:

Barrel Rack, Mar 26 p 65

Hot-Rolled Alloy Steel, Quantity Extras, Mar 19 p 78
Hot-Rolled Quantity Differentials, Republic, Mar 12 p 113

Basements: Attractive Equipment for, May 7 p 74

Basing Point: Dirksen, Representative, Defends System, Apr 30 p 59
Richberg, Donald R., Defends System, Mar 12 p 66; Mar 19 p 74
Senate Hearings, Mar 12 p 70; Mar 19 p 76; Mar 26 p 74; Apr 2 p 63; Apr 9 p 67

Batt, William L.: President SKF Ind Inc.\*, Feb 13 Insert

Batty, George: Skin Formation in Steel Castings, Jan 16 p 14

Bausch & Lomb Optical Co.: Spectrum Measuring Micro-scope\*, Mar 5 p 50

Bearings: Rolling Mill, Developments in, Jan 2 p 438

Becker and Hertel: Chrome Coated Steel, Apr 2 p

Belt Cutter: Flexible Steel Lacing Co.\*, Apr 23 p 48

Belting: ew York Beltpaco Trans-mission, June 4 p 54

Bennie & Sons, Ltd., James: Rotary Shearing Machine\*, May 21 p 41

Berry, Major George L.: Second Industrial Conference, Jan 9 p 61 Beryllium: And Beryllium Alloys\*, Mar 5 p 28

Bethanized Process: Coating Steel Wire with Zinc\*, Apr 23 p 44

Bethlehem Foundry & Machine Co.: Abrasive Cut-Off Machine\*, June 18 p 46

Bethlehem Steel Co.:

Alloy Steel Motion Picture, Apr 2 p 68 Apr 2 p 68 Apr 2 p 68 Annual Report, Mar 12 p 74 Parhanized Wire Mill\*, Apr 23 p 44
Building Light-Weight Cars,
June 18 p 48
Consolidates Subsidiaries, Jan Consolidates Subsidiaries, Jan 23 p 48
Controls Process for Cooling of Rails, Apr 23 p 70
Exhibit at Mining Congress, Apr 23 p 83
Heat Treating Rails\*, June 18 p 34
Installs Fourth Patenting Unit at Maryland Plant\*, Apr 30 p 84
Pension Disbursements, 1935,

p 84
Pension Disbursements, 1935,
Feb 27 p 66
Quarterly Report, Feb 6 p 58;
May 7 p 71
Starts Operation of New Tin
Plate Mills, May 28 p 33
Steel Paving Plates\*, Feb 6
p 62

Welfare Building\*, Feb 6 p 49

Manufacture of\*, Mar 26 p 43 Billets: Alloy Steel, Quantity Extras, Mar 19 p 78

Bingham, Robert: Reynolds System of House Construction\*, Mar 19 p 53

Binkley Coal Co.: Bobolink Strip Mine\*, Jan 30

p 30 Blackall, Frederick S., Jr.:

Better Machine Tools for the Toolmaker\*, Feb 13 p 36

Disston Nu-Mol Hacksaw, June 4 p 52 Blankenbuehler, John H .:

Welding Costs, Effects of Generator Characteristics on\*, Jan 23 p 20

Blatchford Corp.: Cooke Microslotted Nut\*, Mar 26 p 55

Blooms: Alloy Steel, Quantity Extras, Mar 19 p 78

Blue Printing Machine: Pease Model 7, Feb 20 p 47 Blue Va Valley Machine & Mfg.

High - Speed Flanging Ma-chine\*, Mar 19 p 60 Bobolink Strip Coal Mine\*, Jan 30 p 30

Bolt Threading Equipment: Landis Magazine Feed for\*, Mar 5 p 53

Bolton, L. W.: Balanced Blast Cupola\*, May 21 p 38

Enduro Stainless Steel\*, Mar 12 p 60

Bonding Process: Gordon Metal\*, Apr 2 p 40

Allis-Chalmers Mfg. Co. to Pay, Apr 16 p 72

Book Reviews: American Bureau of Metal Statistics, June 11 p 106 American Iron and Steel Institute Statistical Report,
May 28 p 80
American Lubricating
Greases, Mar 19 p 35
Ball Bearings, Mar 5 p 96
Cast Iron Pipe: Its Life and
Service, May 7 p 72
Cold Finished Bars, Mar 19 p 78
Color Chemistry, Color as

Bro

R

Si

Bro

R

W

Bud

Buel

Buff

Buic

Co

Ma

Build

Am Ge S Ha Mc J

Str

Vac

Bull

Bull,

Bulla

Bulla

Burde

Burea

To St

Burea

Cas 55 Cop 4

Iron Tes: 21

Burris

Wa

M a

Ste

Ja

Op

W

olor Chemistry, Color as Light, Color in Use, Feb 20

Custom House Guide, Feb 13 Estimator's Handbook, Apr 9

p 109
Ke m p e's Engineer's Year
Book, 1936, Jan 9 p 62
Metal Statistics, Apr 16 p 70
Structure of Metals and Alloys, Apr 9 p 66
Survey of Raw Materials on
Pacific Coast, Apr 9 p 83
Welding Symposium in Two
Volumes, Jan 9 p 62 109

Boom Boiler & Welding Co.: Large All-Welded Steel Press Brake\*, Apr 23 p 50

Booth, A. S.: Testimony in Basing I Hearing, Mar 19 p 76-A

Borden Farm Products Co., Inc.: Streamlined Steel - Sheathed Milk Car\*, Jan 30 p 53

Boride: New Alloy, Jan 2 p 178 Boring Machines:

Stoker, with Platen Mounted Units\*, Mar 26 p 57

Bowman and Dix: Aluminum and Magnesium Alloys for Construction, Mar 12 p 55

Bradley Washfountain Co.:

Industrial Group Washing Equipment, Mar 19 p 57 Brake:

Magnetic Clutch Record, Apr 16 p 52 ress, Boom Large All-Welded Steel\*, Apr 23 p 50

Coloring by Electrolysis Proc-ess\*, Apr 16 p 25 Bratt, Elmer C .:

Forecasting Growth of Steel Industry, Mar 19 p 48 Brazing:

Electric Furnace, Jan 9 p 27 Tear Gas Shells in Controlled Atmosphere Electric Fur-nace\*, Feb 20 p 37 Brewer, Bradley:

Townsend Plan, Feb 6 p 57

Bridges: Design Competition, Feb 6 p 61; Feb 27 p 94; Apr 30 p 106

Golden Gate, Spinning of Cable Almost Completed\*, Apr 9 p 87 Rosa, Clarence H., Awarded First Prize in Design Con-test\*, May 28 p 59 San Francisco-Oakland Near Completion\*, May 21 p 45

Brill, Franklin E.: Plastics—Competition of Ally?\*, Mar 19 p 32

Broaching Machines:

Cincinnati, for Dodge Con-necting Rods\*, Feb 20 p 42 For Chrysler Connecting Rods and Caps\*, Apr 23 p 55

Broderick & Bascom Rope Co.: 60th Anniversary, May 21 p 72 Broduer, W. L.:

Assembly Control of Machine Tools\*, June 11 p 30

Bronze: Aluminum Alloy, May 14 p

Microscopic Study of Ancient Copper and\*, Feb 27 p 34

Cre Burt, Pres Busine

Acti Gove Less Sto Buttfie Sera

Byers, Eye

Brown & Sharpe Mfg. Co.:

Classifying Castings, Route Card for\*, Jan 23 p 12 Rotary Geared Pumps with Helical Gears\*, Jan 23 p 37 Small Motor-Driven Screw Machine\*, Mar 26 p 54

Brown Instrument Co.:

Recording Thermometer, New Bulb Position\*, Apr 2 p 52

Bryant, George A., Jr.:

Predicts Gain in 1936 ( struction, Mar 26 p 80

Buckingham, Earl:

Worm Gear Contact, Com-parative Study of\*, Mar 5 p

Budd, Edward G .:

Warns Against Loss of Train Strength, May 7 p 105

Buell, W. C .:

Open - Hearth Furnace Con-struction, Apr 23 p 40

n g

nd

19

13

r 9

ear

70 Al-

on

[wo

ress

oint

nc.:

nted

Al-Mar

shing

All-p 50

Proc-

Steel

p 27 rolled Fur-

0 57

b 6 p p 106

g of leted\*,

varded

Con-Near p 45

on or

Con

pe Co.:

21 p 72

fachine

14 p

Ancient p 34

0 0 p 42 g Rods 55 Jackson Ventilated\*, Jan 16

Buick Motor Car Co .:

Combined Operations in Spe-cial - Purpose Machines\*, May 14 p 47 Machining Transmission Cases for Model 40 Car\*, May 7 p 32

Buildings:

American Steel Frame House\*,
May 7 p 39
General Houses, Prefabricated
Steel\*, Feb 20 p 28
Harnischfeger 20th Century
Steel House\*, May 7 p 39
McKay Welded Steel Frame\*,
Jan 23 p 27
Prefabricated Steel Industrial
Unit\*, Mar 19 p 105-D
Structo Prefabricated Steel
House\*, May 7 p 39

Bull Dog Electric Products Co.: Vacu-Break, Safety Switch\*, Mar 5 p 50

Bull, R. A .:

Steel Castings, Developments in, Jan 16 p 15

Machining Feed Worm Wheel\*, Apr 9 p 31

Bullard, E. P .:

President, Bullard Co.\*, Mar 12 Insert

Burden Iron Co.:

Water Wheel in C Works\*, Mar 26 p 38 Original

Bureau of Mines:

To Make Survey of Iron and Steel Scrap, Feb 6 p 37

Bureau of Standards: Casting Test Bars, Feb 6 p

Copper Beryllium Alloys, June 4 p 95 Iron Alloys, Apr 30 p 60 Tests for Prison Bars, May

Burring Machines:

Crescent, with Hydraulic Cycle\*, May 7 p 50

Burt, Clayton R .:

President, Niles - Bement-Pond Co.\*, June 25 p 90

Activity, 1935, Feb 6 p 91 Government in, Jan 16 p 48 Less Government In, First Step Toward Economic Re-form, May 21 p 46

Buttfield, Alfred C .:

Scrap, Detinned, June 18 p 62

Byers, Albert F .:

Eye Appeal in Machinery Design and Finish\*, May 14 p

Byrd, Tom:

ttractive Equipment for Basements, May 7 p 74 Attractive

Calculator:

Morse Silent Chain Drive, Jan 30 p 42

Caldwell, Eugene E .:

How Federal Security Act Affects Wisconsin Manufac-turers, Jan 23 p 23

Campbell, H. L.:

Centrifugal Casting, Jan 16 p

Campbell, Thomas C.:

Steel Industry's Quick Re-covery from Flood Damage\*, Mar 26 p 66

Camshafts:

Development of Proferall Cast, Apr 30 p 47

Canada:

Duty Reductions on American Iron and Steel Products, Duty Reductions on American Iron and Steel Products, May 14 p 64 Iron and Steel Industry, 1935, Jan 2 p 167 Pig Iron Production, 1935, Feb 27 p 66; Four Months, 1936, June 18 p 99

Canadian National Railways: Grinding Driving Axle Jour-nals\*, May 14 p 37

ake Erie and Ohio River Proposed, Apr 30 p 104

Canton Tin Plate Corp.:

Acquired by Republic Steel Corp., June 11 p 70

Continuous Sheet and Wide Strip Mill, Jan 2 p 85 Steel Ingot and Pig Iron, 1935, Mar 5 p 86

Capital Goods:

Apital Goods:

Private Investment Is Key to Revival of, Jan 9 p 47
War on False Gods Holds Fate of, Jan 2 p 40
Weekly Index\*, Jan 2 p 152;
Jan 9 p 52; Jan 16 p 53; Jan 23 p 55; Jan 30 p 57; Feb 6 p 67; Feb 13 p 89; Feb 20 p 75; Feb 27 p 75; Mar 12 p 89; Mar 19 p 81; Mar 26 p 91; Apr 2 p 59; Apr 9 p 58; Apr 16 p 59; Apr 23 p 57; Apr 30 p 53; May 7 p 59; May 14 p 59; May 21 p 57; June 4 p 63; June 11 p 59; June 18 p 55; June 25 p 81
Carboloy Co.:

Carboloy Co.:

Cemented Carbide Tool Grinders\*, Apr 16 p 52 Grinding Carbide Tools, Time Reduction in\*, June 11 p 47 To Handle Widia Cemented Carbide Tools, May 21 p 70

Carburizing:

New Developments, Jan 2 p

Cards, Record:

Standard Operation\*, Jan 16 24

Carnegie-Illinois Steel Corp.:

Abrasion Resisting Steel, Jan 23 p 47
Assistant District Sales Managers, June 25 p 98
Consolidates Lorain Division District Office, Mar 5 p 69
Employee Representation Vote, June 25 p 92
Hot Strip Conveyor System in McDonald Works\*, Mar 26 p 58

McDonald Strip Rolling Mill\*, Feb 20 p 44 Metallurgical Divisions, June 18 p 48

Orders Pressure Meters for New Plate Mill, June 25 p

Sheet and Tin Plate Sales Managers\*, June 4 p 73; June 11 p 78 Takes Over American Sheet & Tin Plate Co.\*, Apr 9 p 113; June 4 p 83 To Give Vacations with Pay, May 14 p 86 Z Piling, Feb 20 p 36

Bethlehem Steel Co. Building Light-Weight, June 18 p 48 Evans Loading Device for\*, Apr 9 p 55 Freight Orders, 1915-1935, Jan

2 p 139 High Tensile Steel in Con-struction of B, & L. E., Feb

20 p 68 Light-Weight, and Railroads, Feb 27 p 38 Milk, Streamlined Steel-Sheathed\*, Jan 30 p 53

Casco Products Corp.:

Production of Catalin Parts\*. Apr 9 p 34

Caskey, L. L .:

Philadelphia Sales Manager of Republic Steel Corp., Apr 23 p 83

Casting:

asting:
Centrifugal, Developments in,
Jan 16 p 15
Gray Iron Under Pressure in
Metal Molds\*, Apr 30 p 30
Test Bars, Method of Bureau
of Standards, Feb 6 p 55
To-Scale Pilot\*, June 18 p 26

Benefits of Radiographic Exploration\*, Apr 30 p 33 Classifying in Brown & Sharpe Plant\*, Jan 23 p 12 Developments in\*, Jan 2 p 524

Castings, Alloy Steel:

Manufacture in Ford Plant\*, Apr 30 p 22

Castings, Die:

Developments in\*, Jan 2 p Exhibition, Apr 9 p 78; May 21 p 44 Pressure Brass\*, May 7 p 40

Castings, Iron:

Definition for, June 25 p 96 For Paving Highways, Apr 2 p 41 Heat Treatment of, May 14 p 74-B Largest and Oldest\*, Apr 30 p Molding Sand for, May 14 p 74-D Origin of\*, Jan 30 p 24 Superheated, Apr 2 p 42 Temperature Control of, May 14 p 74-E

Castings, Steel:

Developments in, Jan 16 p 15 Production, 1935, May 7 p 92 Properties and Design\*, Feb 6 p 20 6 p 30 Skin Formation in, Jan 16 p team Turbine (Elephant)\*, May 28 p 51

Synthetic Resin. Parts Pro-duction\*, Apr 9 p 34

Cemented Carbides:

Developments in, Jan 16 p 17 Export of Widia to United States Discontinued, May 21 p 70 New Tantalum Tools\*, June

P 70 New Tantalum Tools, 18 p 43 Reducing Time of Grinding\*, June 11 p 47 Tungsten-Carbide Tool Developments, Jan 9 p 10

Central Iron & Steel Co.:

Plant Improvements, Apr 2 p

Certified Flexible Couplings,

Flexible Couplings, June 25 p

Chamber of Commerce of United States:

Annual Meeting, Apr 30 p 61 Reemployment Committee, May 21 p 61

Chamfering Machine: Cimatool Duplex Gear Tooth\*, Apr 23 p 49

Champion Rivet Co.:

Electrodes for High Tensile Steels, June 4 p 102

Chapin, W. R.:

Research Engineer, Atkins Company, Appointed Speed-way Metallurgist, June 11 p 73

Chapman, E. S .:

Manufacture of Elliptical Skirted Pistons, Apr 30 p 49

Chapple, Bennett:

Sees Good Future in Low Cost Housing, Jan 23 p 25

Metallurgical Processes in Iron and Steel, Jan 2 Insert

Chase, Herbert:

Pressure Brass Die Castings\*, May 7 p 40

Chavy and Ballay:

Heat Treatment of Cast Iron, May 14 p 74-B

Checker Brick:

Bailey New Open-Hearth\*, Mar 19 p 44 Construction for the Open-Hearth, Apr 23 p 41

Chicago Flexible Shaft Co.: Gasifler for Reducing Gas Fuel Costs, Feb 20 p 46

Chicago Pneumatic Tool Co.: Diesel Engine, R.H.B., Feb 20 p 50

Chicago Steel Foundry Co.:

30th Anniversary, May 21 p

China: Largest and Oldest Iron Cast-ings\*, Apr 30 p 18

Chromium:

Coated Steel, Apr 2 p 42

Chromizing:

Cooper Products Process, Mar 12 p 35 Chrysler Corp.: Broaching Machine for Con-necting Rods and Caps\*, Apr 23 p 55

Chuck: Landis, for Pipe Threaders\*, June 25 p 74

Chucking Machines:

National Acme Model RP Multiple-Spindle\*, Jan 23 p 35

Cimatool Co.:

Chamfering Machine, Duplex Gear Tooth\*, Apr 23 p 49 Cincinnati Milling Machine Co.:

Broaching Machines for Dodge Connecting Rods\*, Feb 20 p 42

Circuit Breaker:

General Electric Air, Improved, Feb 27 p 44 Clark, M. S.

esistance Welding Applica-tions, Apr 2 p 66 Resistance

Clarke, N. J.: Testimony at Basing Point Hearing, Mar 19 p 72

Clarke, S. G.:

Inhibitors in Selective Re-moval of Metallic Coatings, Apr 30 p 43

Clayton Act:

Republic Steel Corp. Publishes Prices Under, Mar 12 p 113

Cleaning:

Internal, of Closed-End, Bot-tle-Neck Parts\*, Mar 19 p 36

Cleaning Equipment:

A merican Wheelabrator Blast, June 18 p 46 Metalwash Midget Metal\*, Jan 30 p 41 Ransohoff for Foundries\*, Apr 30 p 36

Cleerman Machine Tool Co.: Sliding Head Drilling Ma-chine\*, Mar 26 p 56

Cleveland Centennial Exposi-

Exhibitors, Feb 27 p 66 Underwriters, Feb 20 p 90 To Have Porcelain Enamel Building, Apr 9 p 80

Cleveland Cliffs Iron Co.: Annual Report, Mar 19 p 105-B

Cleveland Punch & Shear Works Co.: Blanking and Forming Press\*, Jan 30 p 40 Electric Air Device for Fric-tion Clutches\*, June 18 p 46

Cleveland Universal Jig Co.: Wrench Holder\*, Mar 26 p 54

Cliffs-Dow Chemical Co.: Dismantling Charcoal Fur-nace, Feb 27 p 66

Molybdenum Co. of Climax Moly Michigan:

To Build New Laboratory, June 4 p 95 Clocks:

Stromberg No. 15 Time Re-corder\*, Jan 16 p 36 Close, Joseph K .:

Skilled Labor in the Making, Feb 20 p 28-A

Cleveland Electric Air Device for\*, June 18 p 46

Clutch Brake: Magnetic, Record, Apr 16 p 52 Coal Mine:

Bobolink Strip\*, Jan 30 p 30 Coatings:

Aspro, New Metal Finish, May 14 p 73 Chromium Coated Steel, Apr p 42

2 p 42 Chromizing, Mar 12 p 35 Gordon Metal-Bonding Proc-ess\*, Apr 2 p 40 Metallic, Inhibitors in Selec-tive Removal of, Apr 30 p

metallic, Inhibitors in Selec-tive Removal of, Apr 30 p 43 Metallizing Machine Ele-ments\*, Apr 9 p 49; Apr 16 p 31

31
New Jersey Zinc Co.'s Cronak
Process, May 28 p 94
Pylumin Process, Apr 2 p 42
Roxyn Lacquer for Metals,
May 21 p 42
Steel Wire with Zinc, Bethanized Process\*, Apr 23 p 44

Coburn Trolley Track Co.: Yoloy, Nickel - Copper Steel Rail Test\*, Feb 20 p 62

Coil Winding Machine: Seifert Wire\*, May 7 p 49

Cold Metal Process Co.: Will Rebuild Plant Destroyed by Fire, Mar 12 p 77

Colorado Fuel & Iron Co.: Annual Report, Feb 13 p 81 Reorganized, May 14 p 75

Coloring:

Metals, Copper and Brass\*, Apr 16 p 25 Metals, Iron and Steel\*, Mar 26 p 48 White Metals\*, June 18 p 30

Colpitts, W. W .:

Railroads and Light-Weight Equipment, Feb 27 p 38

Columbia Enameling & Stamp-

National Labor Relations Board Rules Against, Feb 27 p 94 Columbia Radiator Co.:

NLRB Acts Against, June 11

Columbia Tool Steel Co.: Gas Fired Furnaces for Forg-ing Tool Steel\*, Jan 30 p 32

New Alloying Element, Jan 16 p 19

Committee for Industrial Or-ganization: Offer to Amalgamated Association for Steel Unionization, Apr 23 p 62

Compressors:

Air, Allis-Chalmers Ro-Twin, Feb 20 p 50

Concrete Reinforcing Steel Institute:

Convention Proceedings, Apr 30 p 68

Cone, E. F .:

High-Strength Alloy Steel for Construction, Mar 12 p 85 Insulation of Open - Hearth Furnaces, Apr 23 p 42

Coneen, J. F .:

Screw Machine Practice for New Free Cutting Alumi-num Alloy, Feb 13 p 63; Mar 5 p 33

Conklin Brass & Copper Co., T.

75th Anniversary, Jan 30 p 49

Conley, Clyde:

Testimony on Corporation Taxes at Committee Hear-ing, Apr 9 p 63

Consolidated Ashcroft Hancock Co., Inc.: Globe Valves\*, Mar 26 p 56

Construction:

New, 1935, Jan 2 p 124

Consumer Goods:

Expanding Market for Iron and Steel, Jan 2 p 78

Demountable Freight for Less Than Carlots\*, May 7 p 42

Continental Can Co. of Canada, Ltd.:

Constructing Reinforced Concrete Plant During Weather\*, Apr 2 p 48

Continental Machine Special-ties, Inc.:

Band Saw-Do-All\*, Mar 5 p

Contractors:

General Electric Low ar High Voltage, Feb 27 p 44

Control:

Miller Dial Switch for Welders, Mar 12 p 124

Conventions:

American Foundrymen's Association, May 14 p 74-A
American Gear Manufacturers
Association, Apr 23 p 73
American Institute of Mining
and Metallurgical Engineers,
Feb 27 p 22
American Iron and Steel Institute, June 4 p 26
American Management Group,
Apr 23 p 47
American Mining Congress,
May 28 p 78
American Society for Testing
Materials, Mar 12 p 55
American Society of Mechanical Engineers Applied Science, June 18 p 48

American Steel Warehouse Association, June 18 p 40 American Supply and Ma-chinery Manufacturers, Na-tional Supply and Machinery Distributers and Southern Supply and Machinery Dis-tributers Associations, May 21 p 66

21 p 66 Association of Iron and Steel Electrical Engineers, Apr 30

p 45
Chamber of Commerce of
United States, Apr 30 p 61
Concrete Reinforcing Steel Institute, Apr 30 p 68
Electrochemical Society, Inc.,
Apr 30 p 42
Institute of Scrap Iron and
Steel, Jan 30 p 50
Iron, Steel and Allied Industries of California, Feb 13
p 78
Malleable Founders Society,
June 25 p 96
National Association of Purchasing Agents, May 28 p
82

National Machine Tool Build-ers' Association, May 14 p

80 National Metal Trades Association, Apr 30 p 38 Open-Hearth Executives, Apr

Open-Hearth Executives, Apr 23 p 40 Refrigerating Machinery As-sociation, May 28 p 74 Society of Automotive Engi-neers, Production Meeting, Apr 30 p 47 Western Pennsylvania Indus-trial Conference, June 18 p

Conveyors:

or Continuous Strip Mill Pickling Operations\*, Feb 20

p 34 Hot Strip in McDonald Works\*, Mar 26 p 58 Mathews Hexagon Shaft Roller\*, Mar 19 p 61 Whitney 4 p 55

Cooper Products, Inc.: Chromizing Process, Mar 12 p 35

Copper:

Coloring by Electrolysis Proc-ess\*, Apr 16 p 25 Microscopic Study of Ancient Bronze and\*, Feb 27 p 34

Copper Stools:

For Ingots, Apr 23 p 41

Cornell Iron Works:

Gate, Rolling Steel Grilles\*, May 21 p 45

Corrosion:

After Pickling, Major Source of Galvanizer's Dross\*, Feb 20 p 30 Cr-Ni Steel Resistance to Sea Atmosphere, May 21 p 42

Corson and Zeiser:

Beryllium and Beryllium Alloys\*, Mar 5 p 28

Automobile and wages\*, Apr

Automobile and wages\*, Apr 16 p 45 Job, in Steel Industry, Feb 20 p 69 Scrap, Analysis by Districts, Jan 30 p 50 Scrap Compensation Insur-ance, Plan to Reduce, Mar 12 p 76 Welding, Effects of Generator Characteristics on\*, Jan 23 p 20

Couplings:

Certified Flexible, June 25 p Lovejoy L-R Flexible, June 4

Covel Mfg. Co.:

Universal Vise, Mar 5 p 53

Crane Co.:

Establishes Research Division, Jan 2 p 151

Crane, E. V.:

Pressed Metal Equation Trends\*, Jan 2 p 32 Equipment,

Crankshafts:

High Frequency Induction Heating, May 21 p 43 Rockford Drilling Machine Tooled for Finishing\*, Apr 2 p 51

Crescent Machine & Tool Co.: Burring Machine, Hydraulic Cycle\*, May 7 p 50

Cronak Process:

Zine Coating, May 28 p 94

Cronin, John A .:

Progress in Materials Handling Industry\*, Jan 2 p 395

Crosley Radio Corp.:

Kokomo Division Acquired by General Motors Corp., Apr 23 p 70 Mass Production of Parts for Refrigerator Cabinets\*, June 11 p 34

Crown, J. E .:

Aluminum Bronze, May 14 p 74-C

Crowning Machine: National Broach Gear Tooth\*, Mar 19 p 58

Crucible Steel Co. of America: Annual Report, Feb 13 p 80

Balanced Blast\*, Jan 16 p 18; May 21 p 38

Curling Machines:

Peck, Stow & Wilcox Horizon-tal Single and Double End\*, Mar 19 p 57

Curtis, Frank W.:

Small Tools, Recent Develop-ments\*, Jan 2 p 277; Jan 9 p 10

Cutters:

Ingersoll Trylock Inserted Blade, May 7 p 51

Cutting:

Acetylene, and Welding Tools and Machine Parts\*, Jan 16 p 28 Oxy-Acetylene, D in\*, Jan 2 p 496 Developments

Cut-Off Machine:

ut-Off Machine:

Bethlehem Abrasive\*, June 18 p. 46
Eisler Disk\*, Feb 6 p 41
Lewis Automatic Straightening and\*, May 7 p 46
Modern 4½-in., Mar 19 p 58
Tabor Abrasive\*, Mar 19 p 61
Yoder Automatic Flying Shear
Type\*, Mar 19 p 60

Czechoslovakia: Steel Industry, Apr 9 p 92

D

Dalrae Tools Co.:

Cradle Mounting for End Mill-ing Attachment\*, Feb 27 p

Danforth, George:

Checker Construction, Apr 23 p 41 Danly, P. H .:

Torch Cutting and Welding Tools and Machine Parts\*, Jan 16 p 28 Dannekind, A. C.:

Manufacturing Methods, Inventory of Man-Power, Machines and Processes, Feb. 13 p. 57 Davis & Thompson Co.:

Milling Machine, Drum-Type\*, Feb 27 p 46 Multiple-Spindle Drilling Ma-chine\*, Mar 19 p 56

Ge H Deti Re

Davi

AI

Davi

Dear

Debl

Defia

Defi

Delt

Depa

Dep

Des

Desi

W

Dete

Gr

He

Ne

Me

Co

Det Dia

SI

Det

C Gi Die

P Die M

R

W

Die Die

Dies H Dies M

Dies

Diet

Davis, A. F.:

Arc-Welded Air-Powered Scoop\*, Mar 5 p 36

Davis, C. H.:

nent.

ction

chine

Co.:

aulic

Han-p 395

d by Apr

s for June

14 p

oth\*,

erica:

p 18:

izon-

End\*

elop-Jan 9

serted

Tools an 16

nents

ne 18

hten-

p 58 p 61 Shear

92

Mill-

pr 23

elding arts\*,

Ma-Feb

Type\*,

g Ma-

1

Copper Alloys for Construc-tion, Mar 12 p 82

Deane, H. A .:

Molding Sand for Cast Iron, May 14 p 74-D

Deblanchal Furnace.:

New Rotary Melting\*, June 11

Defiance Machine Works:

Horizontal Two-Way Hydraulic Miller\*, Mar 5 p 51

Definition:

For Cast Iron, June 25 p 96

Delta Mfg. Co.:

Grinder with Shielded Wheel Lights\*, Jan 23 p 37

Deoxidation:

Electric Steel\*, Apr 23 p 37

Department of Justice:

Drops Suit Against Cleveland Steel Makers, Feb 13 p 98

Depreciation:

Corporate Surpluses and, May

Descaling:

Hot Steel Hydraulically, Apr 30 p 46

Eye Appeal in Machinery Fin-ish and\*, May 14 p 52 Welding and Casting, Devel-opments, Jan 16 p 16

General Electric, for Locating Deep Laid Pipe, Feb 27 p 45 Hydrogen Sulphide, May 28 p

Detroit Electric Furnace Co.: Resistor Type Rocking Fur-nace, Feb 13, p 82

Detroit Gray Iron Foundry Co.: New Electric Furnace Division\*, Mar 19 p 76-D

Detroit Michigan Stove Co.:

Gas-Fired Radiant Tube Fur-nace for Enameling\*, Feb 6 p 26

Diamond Machine Co.:

Surface Grinding Machine\*, May 7 p 48

Die Casting:

Cast Iron, Wetherill Process, Feb 20 p 48 Gray Iron Under Pressure in Metal Molds\*, Apr 30 p 30

Die Castings:

Developments in\*, Jan 2 p 526 Exhibition, Apr 9 p 78; May 21 21 p 44 Pressure Brass\*, May 7 p 40

Die Casting Machines:

Madison-Kipp Model 7 Ver-tical\*, Jan 23, p 34 Reed-Prentice for Brass Al-loys, Mar 19 p 58

Die Head:

Eastern Insert Chaser for Ta-per Threads\*, Jan 30 p 42

Diemakers:

Why Penalize Experience? Mar 5 p 39

Dies:

Hard Faced\*, Mar 12 p 61

Diesinking Machine:

Mall Flexible Shaft\*, May 7 p 47

Diestocks:

Armstrong Ratchet, Mar 19

Dietert, H. W. and R. A .:

Physical Properties of Molding Sand, May 14 p 74-D

Dirksen, Representative:

Defends Basing Point System, Apr 30 p 59

Disston & Sons, Henry:

Nu-Mol, Hacksaw Blade, June 4 p 52

Dix and Bowman:

Aluminum and Magnesium Alloys for Construction, Mar 12 p 55

Dodge Brothers Corp.:

Broaching Connecting Rods\*, Feb 20 p 42

Doehler Die Castings Co.:

Pressure Brass Die Castings\*, May 7 p 40

Dreses Machine Tool Co.:

Stationary Table Horizontal Drilling and Milling Ma-chines, May 21 p 50

Drilling Machines:

American High-Speed Radial\*, June 18 p 47 Cleerman Sliding Head\*, Mar 26 p 56 Davis-Thompson Multiple-Spindle Vertical\*, Mar 19 p 56

Spindle 56

Dresse Stationary Table Horizontal\*, May 21 p 50 Giddings & Lewis with New Attachments\*, May 21 p 51 Milholland Improved No. 3 Automatic, Apr 16 p 51 Rockford Hydraulic Tooled for Crankshafts\*, Apr 2 p 51

Drives:

Patterson New Motor\*, May 28 p 58 Patterson New Motors, May 28 p 58 Raybestos-Manhattan V-Belt Test, Mar 5 p 49 South Bend V-Belt Lathe, Feb 27 p 46

Dross:

Galvanizer's, Corrosion After Pickling Major Source of\*, Feb 20 p 30

Dumore Co.:

Flexible Shaft with Vari Speed Control\*, Jan 30 > 4

**Dumping Unit:** 

Mathews Conveyer\*, Feb 20 p

Durkee, William B .:

Testimony in Basing Point Hearing, Mar 19 p 76

oal, Auger Steel for Elimi-nating Inhalation of, June 4 p 77 Coal

Dust Collectors:

Schneible Improved. Apr 9 p

Earnings:

Steel Industry, 1935, May 14 p 75

East River Tunnel:

Proposed Grant for, Jan 9 p

Eastern Machine Screw Corp.: Insert Chaser Die Head for Taper Threads\*, Jan 30 p 42

Eastern States Blast Furnace and Coke Oven Association: Spring Meeting, June 11 p 70

Eastham, J. H .:

Simplifying Tire Machine Table Mold\*, Mar 26 p 40

Economic Reform:

First Step Less Government in Business, May 21 p 46

Economy Tool & Machine Co.:

Wire Forming Machine, Auto-matic\*, Apr 2 p 52

American Spirit Proves Itself by Performance, Jan 2 p 37 Constitutions, Little and Big, June 18 p 25

Constitutions,
June 18 p 25
Do You Enjoy Having Your
Shins Kicked? Mar 5 p 27
Fertile Years of Accomplishment, June 25 p 21
Fool-Proof Machine, May 14 p

31
Great Un-American Wire
Tapping Plot, Mar 19 p 27
Horse and Buggy, or 16 Cylinders? May 21 p 33
Keep the Hogs Out of the
Corn Crib, Mar 12 p 29
Let's Examine the Record,
Feb 6 p 19
Mechanization, More About,
June 11 p 29
More Flies with Sugar, Jan
16 p 13

Niagara of Molten Metal, Apr

30 p 17
No Politics in These Projects,
Mar 26 p 31
Plowing Back Forestalls Soil
Depletion, May 7 p 29
Political Preference, 10 Modern Precepts for, Jan 23 p
11
Prepare for Molten Metal, Apr

11
Prepare for Flood Control,
Apr 9, p 25
Rule by Majority, Feb 20 p 21
Rulers of Steel, May 28 p 21
Smile, Darn You, Smile! Apr
2 p 25
To Sharpen an Axe You Need
a Grindstone, June 4 p 25
Wall Street and Main Street,
Feb 13 p 33
We Bow to the Postman, Jan
9 p 9

Webster Had a Word for It, Jan 30 p 19 With Malice Toward None, Apr 23 p 21

Education:

Industrial, and Industrial Mu-seums\*, Apr 2 p 26

Elsler Engineering Co.:

Disk Cut-Off Machine\*, Feb 6 p 41

Electric Hoist Manufacturers Association: Officers, Mar 19 p 80

Electrochemical Society:

50th Anniversary of Aluminum Production, Feb 20 p 91 Convention Proceedings, Apr 30 p 42

Electrodes:

Aerisweld, for Bronze Weld-ing, Apr 2 p 52 Arc - Welding, Developments in\*, Jan 2 p 506 Champion, for High-Tensile Steels, June 4 p 102

Electro Lift, Inc.:

Hoists, ¼ to 3-Tons\*, Apr 2 p 52

Electrolysis Process:

Bethanized, for Coating Steel Wire with Zinc\*, Apr 23 p Coloring Copper and Brass by\*, Apr 16 p 25 Electro-Galvanizing of Round Wire\*, May 21 p 34 Metallic Manganese from Low-Grade Ores, June 4 p 99

Electro-Motive Corp.:

Diesel Locomotive Works\*, Apr 16 p 38

Electronic Inspection Labora-tories:

Inspectron, Semi - Automatic Gage\*, Jan 23 p 37

Joliet & Eastern Railroad: Hauling Case, Jan 23 p 4 Mar 26 p 70; May 28 p 64

Elwell-Parker Electric Co.: rucks for Handling Strip Coils\*, Apr 16 p 43

Empire Sheet & Tin Plate Co.: Shipments, 1935, Mar 19 p 78 To Make Tin Plate and Long Ternes, Jan 30 p 55 Enameling:

Gas-Fired Radiant Tube Fur-nace for\*, Feb 6 p 26

Engineering & Research Corp.: Profiling Machine, Airplane Propeller\*, Feb 6 p 44

Engineering Foundation:

Research Organization Offl-cers, Jan 16, p 49 Welding Research Committee Reorganized, Apr 9 p 79

Engineering Society of Detroit: Organized, Mar 26 p 82

Engineers Society of Western Pennsylvania:

Hughes, I. Lamont, President\*, Jan 30 p 66

Chicago R.H.B., Feb Diesel. 20 p 50 Ford Plan for Reconditioning, Apr 16 p 47

Esco Engineering Co.: Drill Jig\*, Feb 6 p 43

Euclid Crane & Hoist Co.: 25-Ton Crane\*, Jan 30 p 34

Evans Products Co.: Car Loading Device\*, Apr 9 p 55

Evans, Ulik R .: Safe and Dangerous Inhibi-tors, Apr 30 p 44

Ex-Cell-O Aircraft & Tool

Automatic Precision Thread Grinder\*, June 4 p 51 Cemented Carbide Tool Grind-ers\*, Apr 16 p 52

Exhibitions: Art of the Machine Age, May 21 p 93 Cleveland Centennial, Feb 20 p 90; Apr 9 p 80 Die Castings, Apr 9 p 78; May 21 p 44
National Metal Show Announcement, May 7 p 72
Steel Corporation Coal Mine Entry\*, May 21 p 44

Exports:

ixports:

Iron and Steel, November, Jan
9 p 51; December, Feb 6 p
50; January, Mar 19 p 105-C;
February, Apr 9 p 111;
March, May 14 p 74-H;
April, June 11 p 96
Scrap, 1935\*, Jan 2 p 90
Scrap, by Six Leading Countries, 1934, Jan 30 p 54
Tin Plate Scrap, Embargo,
Feb 6 p 56; Feb 20 p 96;
Apr 9, p 66; Apr 16 p 64
Tin Plate Scrap, Regulations
for, June 25 p 85
Tin plate to Spain, Apr 9 p 84

Extras: Alloy Steel Bars, Slabs and Blooms, Mar 19 p 78
Bars, Republic Quantity Differentials, Mar 12 p 113
Cold Rolled Spring Steel, Apr 16 p 67
Sheet Items, Jan 2 p 156
Sheets, Republic Quantity Differentials, Mar 12 p 113

Fabricated Structural Steel: Orders, 1935, Apr 9 p 84

Fairbanks & Co., E. and T .: Foundry Layout\*, Jan 16 p 26

Farm Equipment:

Buying in 1935\*, Jan 2 p 60 Farrel - Birmingham Co., Inc.:

Hydraulic Molding Press\*, Feb 6 p 41 Hydraulic Presses for Plastics and Rubber Molding\*, Mar 19 p 60

Farrell, Morgan:

American System of Enter-prise, Jan 16 p 32; Mar 12 p 45; Apr 2 p 44; Apr 23 p 28

Fawcett, Lewis H.:

Welding and Casting Designs, Jan 16 p 16

Federal Machine & Welder Co.:

Flash Welder, Small\*, Feb 27 p 48 Seam Welding Machine with Track Mounted Fixtures\*, Feb 20 p 47

Federal Trade Commission:

Issues Complaint A gainst Motor and Equipment Wholesale Association and National Standards Parts Association, Apr 23 p 61
Issues Complaint Against Tin Plate Makers, Mar 26 p 72
Issues Consent Decree Against 15 Tin Plate Makers, June 25 p 128
Reports on Alleged Collusive Bids, June 25 p 88

Landis Magazine, for Bolt Threading Equipment\*, Mar 5 p 53

ellows Gear Shaper Co.:

Gear and Worm Testing Ma-chine\*, June 25 p 72 Gear Shaper, Special\*, Feb 27 p 47

Fence:

Anchor Company Making Chain Link of Bethanized Wire, May 7 p 74

Ferroalloys:

Production, 1935, Mar 26 p 89

Streamlined Steel Automobile for Virginia Ferry Corp.\*, June 18 p 71

Fetter, Dr. Frank A.:

Condemns Basing Point System, Mar 12 p 70

Filbert, W. J.:

Testimonial Dinner to, Jan 9

Nicholson, New Teeth Design\*, Jan 16 p 37

Owens-Illinois Glass Fiber, Apr 9 p 42

Finch, John W .:

Metals Manufacture Adds to Permanent Wealth of Na-tion, Jan 16 p 23

Finished Steel:

Production, 1935, May 7 p 92

Finishing Machine:

Yoder Mutiple Slit Edge\*, Jan 23 p 36

Fink and Polushkin:

Microscopic Study of Ancient Bronze and Copper\*, Feb 27 p 34 p 34

Finney, Burnham:

Automobile Industry in 1935, Jan 2 p 70 Resigns as Detroit Editor of The Iron Age\*, Jan 2 p 426

Firestone Steel Products Co.: Manufacture of Motor Vehicle Rims\*, Apr 9 p 38

Firth-Sterling Steel Co.:

Advances Tool Steel Prices, June 4 p 95

Fiske, Rogers A .:

"It Can't Happen Here!" But It Has Happened in Wis-consin, Mar 26 p 32 Farm Equipment Buying in 1935°, Jan 2 p 60 Gisholt Revamped Plant\*, Feb 13 p 45

13 p 45 Plant Equipment\*, Jan 2 p 573; Jan 9 p 40

Fitchburg Grinding Machine Co.: Semi-Automatic Spline Grinder\*, Feb 20 p 48

Flanging Machine:

Blue Valley High-Speed\*, Mar 19 p 60

Fletcher, J. E .:

Balanced Blast Cupola\*, May 21 p 38

Flexible Shafting:

Dumore Governor Control, Vari-Speed\*, Jan 30 p 43 Improvements in \*, Apr 9 p 26 Jarvis Speedwitch \*, Apr 23 p Strand & Co., N. A.\*, Mar 19

Flexible Steel Lacing Co.: Alligator Belt Cutter\*, Apr 23

Flexlock Rubber Joint: Corrosion Proof for Ceramic Pipe\*, Apr 2 p 35

Floods:

Damage in Pittsburgh Dis-trict\*, Mar 26 p 66

Bridge, Cellular Heavy-Duty\*, Mar 5 p 43

Fluorspar Conference:

Program, Apr 23 p 66

Flynn & Dreffein Co.:

Laboratory Type Slab Heat-ing Furnace\*, Feb 20 p 38

Flywheels:

Machining Plymouth\*, Apr 9

Foote Brothers Gear & Machine Corp.:

Plant Consolidation, Mar 26 p

Ford Motor Co.:

S30-Ton Triple-Action Hydraulic Press\*, Mar 5 p 49
Branch Administrative Offices
to Be Air-Conditioned, May
28 p 83
Century of Progress Rotunda
Entrance to Rouge Plant\*,
May 21 p 55
Improvements in Rouge Gas
and By-Products Systems,
Mar 5 p 68
Laboratory, New Control, May
28 p 70
Manufacture of Alloy Steel
Castings\*, Apr 30 p 22
Oil Conditioner on V-8 Engines\*, Apr 30 p 54
Press for Shaping V-8 Body
Panels in One Operation\*,
Jan 23 p 28
Propane Gas Mixing Station\*,
Apr 9 p 43
Reconditioning Engines, Apr
16 p 47
Roof for Light and Ventilation, Feb 27 p 50

Forging:

Locomotive Parts in Gas Fired Furnace\*, Mar 19 p 38

Forging Industry:

Developments, 1935\*, Jan 2, p 309; Jan 9 p 36; May 28 p 76

Foster Brothers Mfg. Co.: NLRB Acts Against, June 11

Foundries:

Castings, Use of To-Scale Pilot\*, June 18 p 26 Fairbanks Layout\*, Jan 16 p

Insulated Ladies in, May 14 p 74-E Simplified Mold for Tire Ma-chine Table\*, Mar 26 p 40 Viewing Tomorrow's Through Spectacles of Imagination, Apr 30 p 26

Foundry Co., G.H.R.:

Foundry Cleaning Methods\*, Apr 30 p 36 Foundry Equipment Manufac-

turers Association: Annual Meeting, Feb 20 p 66

Foundry Practice:

Meeting of Birmingham Sec-tion of A.S.M.E., Mar 5 p 66

Foundrymen's Associations:

American, Convention Proceedings, May 14 p 74-A
American, Organizes Safety
and Hygiene Section, Jan 30
p 55-A
Detroit Chapter Meeting, Mar
26 p 80
New England, 40th Anniversary, Jan 16 p 48

Foxboro Co.:

Pressure Gage, Feb 27 p 45
Pyrometer with Improved
Drive, Feb 20 p 45
Valvactor, Vernier, Feb 27 p
45

France:

Trade Agreement with America, May 14 p 81

Frankland, F. H.:

Chief Engineer A.I.S.C., Jan 16 p 50 Steel's Place in Flood Con-trol, Apr 2 p 68

Freer, Robert E .:

Testimony in Basing Point Hearing, Mar 26 p 74

Freight Rates:

Eigin, Joliet & Eastern Haul-ing Case, Jan 23 p 46, Mar 26 p 70; May 28 p 64 Emergency on Coal and Ore Protested, Apr 23 p 75 Long and Short Haul Clause, Repeal Unlikely, May 14 p

Pipe Suspended, Jan 23 p 54 Pittsburgh Coal Co. Granted Intrastate Rates, May 7 p

67 Railroads Ask Continuance of Surcharges, Jan 30 p 48; Mar 12 p 66 Revised Compilations, Ameri-can Iron and Steel Institute to Reissue, Jan 9 p 62; Feb 6 p 58

to Reissue, san by 6 p 58
Steel Beer Bottles, Reduction Proposed, Mar 26 p 73
Surcharges on Iron, Ore, Coal and Coke Reduced, June 18 Fire Rods to Pacific Coast, Mar 26 p 73

Frick Coke Co., H. C.: Exchanges Coal Facilities with Pittsburgh Coal Co., Feb 27

Friend and Wright: Switching Butane Electric Switch Locomotive\*, Mar 12 p 53

Fries, Frank E .: Bobolink Strip Coal Mine\*, Jan 30 p 30

Frost, Frank R.:

Testimony in Basing Point Hearing, Mar 26 p 78

Furnaces:

Balanced Blast Cupola\*, May 21 p 38 Van Stoning and Bending Pipe, Gas Fired\*, Feb 6 p 34

Furnaces, Blast:

Adrian and Punxsutawney to be Dismantled, Feb 13 p 105 Baldwin Early Historical\*, May 28 p 41 Buena Vista or Blacklick Creek Early Historical\*, May 28 p 43 Capacity, 1935, Mar 5 p 86 Centre Early Historical\*, May 28 p 38 Cliffs-Dow Chemical Co. Dismantling Charcoal, Feb 27 p 66 Early Historical\*, May 28 pp 38-43 Eagle or Curtin Early His-

38-43
Eagle or Curtin Early Historical\*, May 28 p 40
Fountain, Early Historical\*, May 28 p 40
Hannah or Laurel Early Historical\*, May 28 p 39
McCoy's Early Historical\*, May 28 p 43
Pig Iron Production, Decem-

Gea

Gea

M

11

Geh

Gei

Gei

Gen

50

B

C

X

Ger

Ger

Ger

R

ber, Jan 9 p 65-C; January, Feb 6 p 66; February, Mar 5 p 70; March, Apr 9 p 56; April, May 7 p 90; May, June 4 p 100
Plans and Prospects in U.S.S.R.\*, Jan 30 p 28
Ritters or Eliza Early Historical\*, May 28 p 42
Ross Mountain Early Historical\*, May 28 p 41
Summary by Years, When Relined, Rebuilt or Built, Jan 30 p 55-A

Furnaces, Electric:

Brazing, Jan 9 p 27 Brazing Tear Gas Shells\*, Feb 20 p 37 20 p 37 Deoxidation of Steel\*, Apr 23

p 37
Detroit Resistor Type Rocking, Feb 13 p 82
For Casting Alloy Steels in Ford Plant\*, Apr 30 p 22
Their Part in Metallurgical Progress, June 4 p 32

Furnaces, Enameling:

Gas Fired Radiant Tube\*, Feb 6 p 26

Furnaces, Forging:

And Heat Treating Locomo-tive Parts, Mar 19 p 38 Gas Fired, for Tool Steels\*, Jan 30 p 32

Furnaces, Heating:

Circular for Ingots, Apr 30 p 45 Laboratory Type Slab in Acme Plant\*, Feb 20 p 38 Swoboda High Temperature Muffle\*, June 25 p 75

Furnaces, Melting:

Brackelsberg in Kelsey-Hayes Plant\*, Apr 9 p 46 Deblanchal, New Rotary\*, June 11 p 50

Furnaces, Open-Hearth:

Construction, Apr 23 p 40 Great Lakes Steel Corp. to Build Four New, Feb 6 p 89 Insulation, Apr 23 p 42 Recent Developments in De-sign and Operation\*. June 4 p 36

Furnaces, Pouring:

Monarch Lip Tilting\*, Jan 30 p 42

G

Gages:

Display of Measuring, Jan 16 p 61
Electronic Inspectron, Semi-Automatic\*, Jan 23 p 37
Foxboro Pressure, Feb 27 p 45
General Electric Thickness,
Feb 27 p 45

Galbraith, A. T .:

Can Tool Steel Be Merchan-dised?\* May 28 p 44

Galvanizing:

Dross, Corrosion After Pick-ling Major Source of\*, Feb 20 p 30 Electro, Round Wire\*, May 21 p 34 Innovations, 1935, Jan 16 p 16

Gandelot, Howard K .:

Ford Engine Reconditioning, Apr 16 p 47

Gannett, Farley:

Ganzauge, M. T.: Aluminum Bronze, May 14 p

Gardner Grinder Co.:

200 Series Single-Spindle Disk Grinder\*, Jan 16 p 36

Strike! Apr 2, p 32

Propane, Ford Mixing Sta-tion\*, Apr 9 p 43

Gasifier:

Device for Reducing Gas Fuel Costs, Feb 20 p 46

Ge Git

Gid

Gil

uary, Mar Mar p 56; May,

s in His-

stori-When Built,

, Feb pr 23 lock-

ls in 2 rgical , Feb

omoeels\*, 30 p

ature layes ary\*.

Acme

in 30

ın 16 iemip 45 ness,

han-Pickay 21 p 16

14 p

ning.

Disk Sta-

Fuel

Cornell, Rolling Steel Grilles\*, May 21 p 45

Gear Tester: Fellows Worm and\*, June 25 p 72

Michigan Testing Machine\*, June 4 p 52 Worm, Comparative Study of Contact\*, Mar 5 p 44 Michigan

Gehrig, E. F.: Gas-Fired Radiant Tube Enameling Furnace\*, Feb 6 p 26

Geier, Frederick V.:

President Cincinnati Milling Machine & Cincinnati Grind-ers, Inc.\*, Apr 9 Insert

Geiger, G. F.: Nickel Alloys for Construc-tion, Mar 12 p 84

General Electric Co.:

General Electric Co.:

50th Anniversary, June 11 p
68; June 18 p 66
Brazing Tear Gas Shells in
Controlled Atmosphere Electric Furnace\*, Feb 20 p 37
Circuit Breaker, Redesigned
Air, Feb 27 p 44
Contactors, High and Low
Voltage, Feb 27 p 44
Demonstration Home-Building
Program, Apr 2 p 68
Detector for Locating Deep
Laid Pipes, Feb 27 p 45
Gage, Thickness, Feb 27 p 45
Heating Unit, Fin-Type Calrod, Feb 27 p 45
Inventory of Manufacturing
Methods, Feb 13 p 57
Relays, Feb 27 pp 44, 45
Safety Record, Feb 6 p 61
Steam Turbine Casting (Elephant)\*, May 28 p 51
Switchboards, Streamlined,
Feb 27 p 44
Switches, Feb 27 p 44; Mar 5

p 44 Switches, Feb 27 p 44; Mar 5 X-Ray Equipment for Heavy Units, Portable\*, Apr 2 p 50

General Electric Vapor Lamp

Light Unit, Circular Mercury-Incandescent\*, Feb 27 p 48

General Houses, Inc.: Prefabricated Steel House\*, Feb 20 p 28

General Machinery Corp.:

To Merge with Niles-Bement-Pond Co., Mar 26 p 110 General Motors Corp.:

Annual Report, Apr 30 p 99 Buys Kokomo Division of Crosley Radio Corp., Apr 23

Crosley Radio Corp., Apr 20 p 70 p 70 Laboratory Addition, Turning First Spadeful\*, June 4 p 55

General Plastics, Inc.: Manufacture of Plastics\*, Mar 19 p 33

Gerken, T. H .:

Becomes Managing Editor of The Iron Age\*, Feb 6 p 45 Continuous Sheet Mills\*, Jan 2 p 82 Steel Distribution, 1935\*, Jan 2 p 53

Germany:

New Type Steel House, Feb 6 p 29

Gibson, A. E .: Welding Large Telescope\*, Feb 6 p 20

Giddings & Lewis Machine Tool

Boring, Drilling and Milling Machine with New Attach-ments\*, May 21 p 51

Gillett, H. W .: Trends in Metallurgy of Low-Alloy, High-Yield Strength Structural Steels, Feb 27 p Girdler, Tom M .:

Address at American Management Association Conference, Feb 6 p 73
Outlook for Steel Industry, Apr 23 p 71
Problems Confronting Steel Industry, June 4 p 29

Gisholt Machine Co.: Revamped Plant\*, Feb 13 p 45

Glidden, W. E .: Metallization of Machine Elements\*, Apr 9 p 49; Apr

Gonser and Heath:

p 31

Physical Properties of Soft Solder\*, Feb 27 p 30

Goodrich Co., B. F.: Flexlock Rubber Pipe Joint, Corrosion Proof\*, Apr 2 p 35

Gordon, F. F .: New Metal Bonding Process\*, Apr 2 p 40

Gordon, George L.:

Gormley, M. J .:

Testimony at Basing Point Hearing, Mar 19 p 73; Apr 2 p 65

Protests Additions to Costs of Railroads, June 25 p 98

Gorton Machine Co., George: Pantograph Machine, New Die Cutting\*, Apr 23 p 48

Grace, Eugene G.: Chronology\*, May 28 p 26 Industry and the Public, June 4 p 26 Steel and Progress, May 28 p 22

p 22 estimony at Basing Point Hearing, Apr 9 p 74

Great Britain: Pig Iron and Steel Production, May 28 p 71 Progress in Steel Industry, Mar 12 p 41

Great Lakes Exposition: (See Cleveland Centennial Exposition)

Great Lakes Steel Corp.:

Begins Operations on 96-In.
Strip Mill\*, Mar 26 p 112;
June 18 p 106
To Build Four New OpenHearth Furnaces, Feb 6 p 89

Greene, Albert E .: Deoxidation of Electric Steel\*, Apr 23 p 37

Greenfield Tap & Die Corp.: Opens Detroit Plant, June 11 p 33

Gregg, Robert: Testimony at Basing Point Hearing, Mar 26 p 79

Grilles:

Radiator, Manufacture of Pon-tiac\*, Feb 27 p 56

Grinding:

Canadian National Driving Axle Journals\*, May 14 p 37 Carbide Tools, Time Reduction in\*, June 11 p 47 Manganese Steel Parts in Marion Steam Shovel Plant\*, Mar 12 p 46

Grinding Machines:

Baldwin - Southwark Spring and Flat Surface\*, June 25

and Flat Surface\*, June 25 p 75
Delta, with Shielded Wheel Lights\*, Jan 23 p 37
Diamond Surface\*, May 7 p 48
Ex-Cell-O Automatic Precision Thread\*, June 4 p 51
Ex-Cell-O Cemented Carbide Tool\*, Apr 16 p 52
Fitchburg Semi-Automatic Spline\*, Feb 20 p 48
Gardner 200 Series Single-Spindle Disk\*, Jan 16 p 36
Hisey-Wolf Portable Worm Thread\*, Jan 30, p 43
Oliver Tool and Cutter\*, Api 23 p 51

Oliver Twist Drill, Mar 12 p

124
Prosser Cemented Carbide
Tool\*, Mar 5 p 52
United States Floor, Model
65\*, June 4 p 54
Van Norman Piston\*, Feb 6 65°, June 4 p 54 Van Norman Piston°, Feb 6 p 43 Williams, White Special Hori-zontal\*, Apr 16 p 51

Guffey Coal Act:

Held Unconstitutional by Su-preme Court, May 21 p 64; May 28 p 80

Gulf States Steel Co.:

Quarterly Report, Feb 6 p 102; Apr 23 p 70

Hadfield, Sir Robert: Chairman Hadfields, Ltd.\*, Jan 2 Insert

Hall, Charles M.: Process for Making Alumi-num\*, Feb 20 p 22

Hamilton Coke & Iron Co.: Prefabricated Steel Office and Storage Building\*, Mar 19 p 105-D

Hamilton Standard Propeller Profiling Machine, Airplane Propeller\*, Feb 6 p 44

Hammond Machinery Builders, Polishing Lathes, Feb 6 p 40

Hanna Engineering Works: Hydraulic Riveter, High-Speed\*, May 7 p 50

Hannifin Mfg. Co.: Rapid Hydraulic Riveter\*, June 4 p 50 Packless Manifold Air Control Valves, May 7 p 51

Hanscom Baking Corp.: Stainless Steel Delivery Truck\*, Apr 2 p 47

Hanson, Victor A .:

Transmission, New Profits from Planned Power, Jan 2 p 361; Jan 9 p 30 Harant and Muller:

Anodic Pickling of Iron and Steel, Apr 30 p 42

Hardening: ligh Frequency Induction Heating for Rapid, May 21 p 43

Harder, Dr. Oscar E .: Urges Selling Backed by Au-thoritative Facts, May 14 p 94

Hardinge Brothers, Inc.:

Cataract Precision Bench Lathe\*, Mar 26 p 57 Haring, H. A.:

How to Cut Payroll Tax, Feb 6 p 24 Harnischfeger Corp.:

Arc Welder for Increased
Thickness Range, Apr 2 p 50
Electric Hoists, New Line\*,
Mar 5 p 68
Tilting Turntable Welding Positioner, Mar 26 p 57
Twentieth Century Steel
House\*, May 7 p 39

Harrison, R. E. W.: Forging Progress, May 28 p 76 In Obsolescence, Management Ideas Are Fundamental, May 14 p 50

Hauck Mfg. Co.: Combustion Data Book, June 4 p 81

Heald Machine Co.: Assembly Control of Machine Tools\*, June 11 p 30

Heaters:

American Car & Foundry End Forging\*, June 4 p 53 American Electric Air, May 7 p 50 General Electric Fin-Type Cal-rod, Feb 27 p 45

Heath and Gonser:

Physical Properties of Soft Solder\*, Feb 27 p 30

Convection, Jan 16 p 20 Ingots, Circular Furnace for, Apr 30 p 45 Plant, Jan 2 p 576

Heat Treating:

Developments in\*, Jan 2 p 467 Iron Castings, May 14 p 74-B Locomotive Parts in Gas-Fired Furnace\*, Mar 19 p 38 New Magnet Steels\*, Jan 2 p 173 Rails at Bethlehem Plant\*, June 18 p 34

Heinz Co., H. J.: Apologies to, Feb 6 p 56

Heller Brothers Co.: File Catalog, Apr 9 p 82

Hendey Machine Co.: Engine Lathe, 4C\*, Jan 16 p 35 Step-Turning Lathe\*, Feb 20 p 46

Hensel, Dr. F. R.: Chemistry of Arc Welding, Jan 23 p 54

Hercules Steel Products Co.: Welding Machine with Port-able Power Take Off\*, Feb 6 p 42

Herington, C. F .: Deblanchal, New Rotary Melt-ing Furnace\*, June 11 p 50

Herman Pneumatic Machine Hi-Speed Jarr Rollover Mold-ing Machines\*, Jan 30 p 43

Hertel and Becker: Chrome Coated Steel, Apr 2 p 42

Higgins, John W.: Industrial Education and In-dustrial Museums\*, Apr 2 p 26

Paving with Cast Iron, Apr 2 p 41 Hi-Jolly Monument\*, June 11

p 44 Hisey-Wolf Machine Co.: Portable Worm Thread Grinder\*, Jan 30 p 43

Hobbing Machines: Scherr Spline and Pi Reinecker\*, May 7 p 51

Hodge, Dr. Edwin T.: Raw Materials for Pacific Coast Iron and Steel Indus-try, Report, Jan 23 p 22

Hodge, Dr. J. C .: Welding of Alloy Steels\*, Jan 30 p 20; Feb 13 p 52

Hoglund, G. O., Aluminum Welding Progress\*, Mar 19 p 46

Hoists:

Highways:

Electro Lift, ¼ to 3 Tons\*, Apr 2 p 52 Harnischfeger Mar 5 p 68

Holders:

Cleveland Wrench\*, Mar 26 Smit Water Cooled Diamond\*, Feb 6 p 86

Welding Conference Program, May 28 p 80

Hollup Corp.:

Holveck, J. E.: Descaling Hot Steel Hydrauli-cally, Apr 30 p 46 Hook, Charles R.:

Labor Relations in Steel In-dustry, June 4 p 31

Hook, I. T.:

Welding Copper Alloys\*, Feb

Hough, J. H.:

Conveyors for Continuous Strip Mill Pickling Operations\*, Feb 20 p 34

Houses:

American Steel Frame\*, May 7 p 39
General Prefabricated Steel\*, Feb 20 p 28
Harnischfeger 20th Century Steel\*, May 7 p 39
Insulated Steel Sheet, German, Feb 6 p 29
Kelvinator Low Cost, May 28 p 93

p 93 McKay Welded Steel Frame\*, Jan 23 p 27 Reynolds System of Construc-tion\*, Mar 19 p 53 Structo Prefabricated Steel\*, May 7 p 39

Housin :

Low Cost, Good Future Seen in, Jan 23 p 25 Market for Steel\*, Jan 2, p 64 Purdue University Survey, Marker University
Purdue University
Mar 5 p 38
Steel, Progress in 1935, Jan 2

Hovey, Dr. Otis E .:

Urges Greater Use of Steel in Dams, Feb 13 p 51

Howe Memorial Lecture\*, Feb 27 p 26

Howell, E. C .:

Reduction in Carbide To Grinding Time\*, June 1 p 47

Hubbard, Guy:

Five-Year Revolution in Ma-chine Tool Design\*, Jan 2 chine p 219

Hughes, John:

Retires as Assistant to President, United States Steel Corp.\*, Feb 6 p 63

Hughes, L. Lamont:

resident, Engineers Society of Western Pennsylvania\*, Jan 30 p 66

Human Element:

At Crossroads of Life, May 28 p 48 Business

Hupp Motor Car Corp.:

Pipe Lines for Delivering Paint to Spray Guns\*, Jan 23 p 15

Hurst, J. E .:

Heat Treatment of Cast Iron, May 14 p 74-B

Hydraulic Press Mfg. Co.: Radial Pump, 4R\*, June 25 p 74

Ihrig, Harry K .:

Process for Silicon-Casing Steel, May 21 p 41

Illinois Central System:

Green Diamond Streamlined Diesel-Electric Train, Apr 16 p 71

Imhoff, Wallace G.:

Galvanizer's Dross\*, Feb 20 p Galvanizing Innovations, Jan 16 p 16

Imperial Electric Co.:

Squirrel Cage Motors, ½ to 200-Hp., Mar 19 p 56

Imports:

mports:

From Italy, Apr 23 p 83
Iron and Steel, November, Jan 9 p 51; December, Feb 6 p 50; January, Mar 19 p 105-C; February, Apr 9 p 111; March, May 14 p 74-H; April, June 11 p 96
Iron Ore and Sources of Supply, November, Jan 9 p 51; December, Feb 6 p 50; January, Mar 19 p 105-C; February, Apr 9 p 111; March, May 14 p 74-H; April, June 11 p 96
Manganese Ore and Sources of Supply, November, Jan 9 p 51; December, Feb 6 p 50; January, Mar 19 p 105-C; February, Apr 9, p 111; March, May 14 p 74-H; April, June 11 p 96
Pig Iron by Countries of Origin, November, Jan 9 p 51; December, Feb 6 p 50; January, Mar 19 p 105-C; February, Apr 9, p 111; March, May 14 p 74-H; April, June 11 p 96
Pig Iron by Countries of Origin, November, Jan 9 p 51; December, Feb 6 p 50; January, Mar 19 p 105-C; February, Apr 9 p 111; March, May 14 p 74-H; April, June 11 p 96
Steel, Cost to American Employees, 1935, Apr 30 p 106
Steel Products, Competition from, June 4 p 28

Income:

National, Ratio of Tax Collec-tions, 1932-1934 to, Jan 9 p

Independent Pneumatic Tool

Improved Portable Tools, Apr 16 p 49

Ingalis Iron Works Co.:

Plant Extensions, Feb 6 p 60

Ingersoll Milling Machine Co.: Trylock Inserted Blade Cut-ters, May 7 p 51

ingersoll-Rand Co.:

Compressor Valves\*, Mar 26 p 56 Self-Rotated Stopehamer\*, June 4 p 55

Ingots, Alloy Steel:

Quantity Extras, Mar 19 p 78

Ingots, Steel:

And Castings, World Production, 1935, Jan 2 p 98
Capacity, 1935, Mar 5 p 86
Production, 1935, May 7 p 92
Production, December and Year, Jan 9 p 65-D; January, Feb 13 p 82; February, Mar 12 p 74; March, Apr 9 p 95; April, May 14 p 74-F; May, June 11 p 106

In Selective Removal of Metallic Coatings, Apr 30 p 43 Safe and Dangerous, Apr 30 p

Inland Steel Co.:

Annual Report, Feb 6 p 58 Negotiating for Acquisition of Milcor Steel Co., Apr 30 p

To Build New Open-Hearth Steel Plants, Jan 16 p 67

Institute of Scrap Iron and Steel:

Convention Proceedings, Jan 30 p 50 Executive Committee, Feb 20 p 96 Plan to Reduce Compensation Insurance Costs, Mar 12 p

Insulated Steel Construction Co.: Prefabricated Industrial Unit\*, Mar 19 p 105-D

Insulation:

Open-Hearth Furnaces, Apr 23 p 42

Insurance:

Compensation, Plan for Reduction in Scrap Iron Industry, Mar 12 p 76

Interlake Iron Corp.:

Iron Paving Blocks\*, Feb 6 p

International Harvester Co.: Annual Report, Mar 19 p 105-B

International Nickel Co.:

Field Representatives, Apr 9 p 130 NLRB Orders Election at Huntington Plant, June 18 p

Quarterly Report, June 4 p

Iron and Steel Institute (British): Annual Dinner, May 28 p 78

Iron, Steel and Allied Industries of California:

Convention Proceedings, Feb. 13 p 78

Irvin, William A .:

Attacks Trade Agreements, Jan 16 p 46 Competition from Foreign Steel Products, June 4 p 28 Testimony at Basing Point Hearing, Apr 9 p 68

Irwin, G. W.:

Braze Welding Broken Shaft of Large Rock Crusher\*, Apr 2 p 36

J

Jacobs, Fred B .:

Bicycle Manufacture\*, Mar 26

Grinding Manganese Steel Parts\*, Mar 12 p 46 Manufacture of Motor Vehicle Rims\*, Apr 9 p 38

Jacobus, A. B.:

Fairbanks Foundry Layout\*, Jan 16 p 26

Jarvis Co., Charles L .:

Speedwitch Flexible Shaft\*, Apr 23 p 50

Javits, Benjamin A.:

Economic Reform, May 21 p

Jefferson Electric Co.: Mercury Vapor Lamp Auxili-ary Transformers, Jan 16 p 34

Jeffries, Zay:

Aluminum—From a Chemical Element to an Industrial Metal<sup>8</sup>, Feb 20 p 23 Special Cemented Carbides, Jan 16 p 17

Jessop Steel Co.: Composite Steels for Jails, Mar 19 p 43

Jigs.:

Esco Drill\*, Feb 6 p 43

Johnston, Dr. John:

Steel Making, Jan 16 p 17 Useless Testing Methods, Apr 16 p 68

Flexlock Rubber Pipe, Corrosion Proof\*, Apr 2 p 35 Wheeling Expansion for Concrete Pavements, Feb 6 p 62

Jones & Laughlin Steel Corp.:

Financing for New Steel Mills and Improvements, Feb 20 p 81; Mar 5 p 61; Apr 2 p 72 Government Withholds Sheet Piling Award, June 18 p 70; June 25 p 82 Hearings Before NLRB, Mar 12 p 68 Jones, W. L., Jr., and M. C. Angloch Vice - Presidents\*, Feb 13 p 98 Safety Record in Aliquippa Plant, Jan 16 p 77 To Appeal Recent Finding of NLRB, Apr 16 p 88 Welded Manipulator for New Blooming Mill, Jan 23 p 51

Jones, W. L., Jr.:

Vice - President Jones & Laughlin Steel Corp.\*, Feb 13 p 98

Joseph, Carl F .:

Temperature Control of Cast Iron, May 14 p 74-E

Journals:

Driving Axle, Grinding Canadian National\*, May 14 p 37

Kaiser-Wilhelm Institute Iron and Steel Research: Research Bulletins for 1935, May 27 p 43

Kelley, Floyd G .: Chromizing Process, Mar 12 p

Kelsey-Hayes Wheel Co.:

Melting Iron and Steel in Brackelsberg Furnace\*, Apr 9 p 46

Kelvinator Corp.:

Low-Cost House, May 28 p 93

Kettering, Charles F.:

Receives Washington Award, Jan 23 p 51

Keith, Stanley R.:

Metallurgical Processes in Iron and Steel\*, Jan 2 Insert Chart

Kikuchi, Hideyuki:

New Steel Process — Electric Beam Wave for Smelting Ores, Apr 2 p 40

King, C. D.:

Developments in Open-Hearth Furnace Design and Opera-tion, June 4 p 40

Kinnear, H. B .:

Copper Stools for Ingots, Apr 23 p 41

Kinzel, A. B.:

Low-Alloy High Tensile Steels\*, Apr 23 p 32 Knisely, Stanley A.:

Advertising's Place in Market-ing of Steel, May 28 p 46

Knudsen, William S .: Addresses Tool Engineers, Jan 16 p 45

Kyle, P. E.: Molding Sand, Performance at High Temperatures, May 14 p 74-D

L

Labor:

5-Day Week in Business, Feb 13 p 64 American Rolling Mill Co. Trains Workers in First Aid, Apr 30 p 68 Bethlehem Steel Co.'s Pension Disbursements, 1935, Feb 27 p 66

Bethlehem Welfare Building\*, Feb 6 p 49

Bethlehem Welfare Building\*, Feb 6 p 49
Carnegie-Illinois Steel Corp. to Give Vacations with Pay, May 14 p 86
Drive for Steel Industry Unionization, Feb 27 p 64; Apr 23 p 62; May 21 p 62; June 4 p 74; June 18 p 58; June 25 p 92
Employee Representation Vote in Carnegie-Illinois Steel Plants, June 25 p 92
Employee Representation Vote in Republic Plant, June 18 p 48

Employee Training, Jan 23

p 31 Employee Welfare, Voluntary Company Programs, Apr 9 p 130

Employment, Administration's Program for Industrial Re-employment, Apr 30 p 89

Em Em Em

A P Guf Her

Ind of Ind of Job Mil

> Rer Ski T 2: Ste fe Sto Str Une

Pay 6

Rel

Wa A Wa Wa We

Labo Cli Lach Re:

Ste

Wa Laco Ladi Ins

Lake Lake

Lafa

Iro Iro Lam Employment and Wages in Iron and Steel Industry, Jan 2 p 142 Employment in Automotive Industry Three Months, Feb

ast

na-9 37

for

935.

12 p

Apr

p 93

ard.

Iron sert

tric

arth

era-

Apr

ile

ket-

e at y 14

Feb

First

nsion eb 27

ing\*.

Corp. Pay,

ustry p 64; p 62; p 58;

Vote Steel

Vote ne 18

n 23

ntary or 9 p

tion's Re-89

Industry Three Months, Feb. 27 p 96
Employment in Iron and Steel Works Highest Since 1930, June 25 p 87
Employment in Steel Industry, 1935, May 14 p 76
Employment Representation in American Steel & Wire Plants, Mar 5 p 64
Guffey Coal Act Held Unconstitutional by Supreme Court, May 21 p 64
Hearing on Pittsburgh Steel Co. Election, Jan 16 p 48
Industrial Conditions in Wisconsin\*, Mar 26 p 32
Industrial Relations, Address of Tom M. Girdler, Feb 6 p 73

of Tom M. Girdler, Feb 6
p 73
Joh Cost in Steel Industry.
Feb 20 p 69
Milwaukee Repeals Boncel Ordinance, June 18 p 67
NLRB Orders Elections at
Pittsburgh Steel Co. Plants,
Feb 27 p 96
NLRB Rules Against Columbia Enameling & Stamping
Co., Feb 27 p 94
Payroll Tax, How to Cut, Feb
6 p 24
Relations in Steel Industry

Payroll Tax, How to Cut, Feb 6 p 24
Relations in Steel Industry, June 4 p 31
Republic Steel Corp. to Give Vacations with Pay, May 14 p 86
Skilled, Toledo Vocational Training Plan, Feb 20 p 28-A

Skilled, To 1e do Vocational Training Plan, Feb 20 p 28-A

Steel Corporation's Program for Recruiting and Training Employees, Jan 2 p 149

Stout Flour Mill Union Decision, Jan 23 p 47

Strike! Apr 2 p 32

Unemployment and Unemployment Rellef, Apr 30 p 106

Unemployment, November, Jan 2 p 150; December, Feb 6 p 57; January, Mar 26 p 82; March, Apr 30 p 63

Vacation Plan of Weirton Steel Co., June 4 p 78

Wages and Automobile Costs\*, Apr 16 p 45

Wages Not Cut Since End of NRA, Jan 30 p 49

Wages of Steel Workers, Yearly, Apr 2 p 69

Working to Music\*, Apr 16 p 41

Laboratories:

Climax Molybdenum to Build New, June 4 p 95 Ford Opens New Control, May 28 p 70

Lacher, G. L .:

Resigns as Managing Editor of The Iron Age\*, Feb 6 p Steel Industry in 1935, Jan 2

var on False Gods Holds Fate of Capital Goods, Jan 2 p 40

Lacquer:

Roxyn, for Metals, May 21 p 42

Ladles:

Insulated, Use in Foundries, May 14 p 74-E

Lafayette College:

To Celebrate 70th Anniversa of Engineering, Mar 5 p

Lake Erie Chemical Co.:

Tear Gas Shells, New Type\*, Feb 20 p 37

Lake Superior Iron Ore Associa-tion:

Iron Content of Ore, 1935, Apr 30 p 66 Iron Ore, Distribution, 1935, June 11 p 46 Iron Ore Shipments, 1935, Jan 9 p 57; Feb. 20 p 55

Laminated Shim Co.:

Stock Dispensing Wall Unit\*, Jan 23 p 35

Lamps:

Mercury Vapor Auxiliary Transformers, Jan 16 p 34

Lamson & Sessions Co.:

Wins Second Prize in Packag-ing Contest\*, June 4 p 61

Landis Machine Co.:

Andis Machine Co.:
Chuck for Pipe Threaders\*,
June 25 p 74
Double End Threading Fixture\*, Apr 23 p 51
Magazine Feed for Bolt
Threading Equipment\*, Mar
5 p 53
Ring Type Oil Reservoir\*, Feb
20 p 50

20 p 50 Threading Machine for Tight-ening Drill-Pipe Joints\*, Feb 6 p 42

Larsen, E. I.:

Spot Welding, Jan 23 p 54

Lathe Centers:

Tungsten Carbide Tipped, Jan

Lathes:

Hammond Polishing\*, Feb 6 Pardinge Cataract Precision Bench\*, Mar 26 p 57 Hendey 4C Engine\*, Jan 16 p

Hendey Hi-Speed Step Turning\*, Feb 20 p 46
LeBlond for Ball Race Grooving\*, June 25 p 74
LeBlond Heavy-Duty Crankshaft\*, June 4 p 50
Monarch Semi - Automatic\*, Jan 16 p 34
Porter-Cable Central Head Control for\*, Feb 27 p 49
Wickes Automatic Crankshaft\*, Apr 16 p 52

Fairbanks Foundry\*, Jan 16 p 26

Demountable Freight Containers for Less Than Carlots\*, May 7 p 42

LeBlond Machine Tool Co., R. K.: Lathes, Ball Race Grooving\*, June 25 p 74 Heavy - Duty Crankshaft Lathe\*, June 4 p 50

Lewis Machine Co.:

Automatic Straightening and Cutting Machine\*, May 7 p

Lidseen, Inc., Gustave: Oilers, Force Feed and Pump Type\*, May 7 p 49

Lighting:

General Electric Circular Mer-cury Incandescent Unit\*, cury Incandescent Unit Feb 27 p 48 Industrial Plant, Jan 2 p 578

Lincoln Electric Co.:

Aerisweld, Electrode for Bronze Welding, Apr 2 p 57 Arch Welded Design Data Chart, June 11 p 89

Lind, Herman H .:

General Manager, National Machine Tool Builders' Associations, May 14 Insert Machine Tool Industry, 1935, Jan 2 p 74
Plowing Back Forestalls Soil Depletion, May 7 p 29
Testimony Against Corporation Tax Bill; May 14 p 67
Walsh Bill, What It Means to Business, Jan 23 p 29

Link-Belt Co.:

Placer Gold Mining Equip-ment\*, Jan 30 p 34 Speed Reducer, Cut Tooth Worm Gear\*, Jan 23 p 36

Linke, Gerald D.:

X-Ray Procedure at Naval Gun Factory, Jan 16 p 18

Criticizes Social Security Act, Mar 19 p 90

Lippert, T. W .:

Alloy Developments in 1935\*, Jan 2 p 171
Carburizing, Nitriding and Refractories, Developments in\*, Jan 2 p 467; Jan 9 p 17
Consumer Requirements Now Dictate Mill Equipment\*, Jan 2 p 430
Late Returns from Laboratory and Mill\*, Apr 2 p 40; May 21 p 41
Rustless Steel Production, 1935\*, Apr 23 p 22
To-Scale Pilot Castings, Use of\*, June 18 p 26
World Pig Iron and Steel Output, 1935\*, Jan 2 p 98

Loading Device:

Evans Car\*, Apr 9 p 55

Locomotives:

Acme Butane-Electric Switch-ing\*, Mar 12 p 53 Diesel Works of Electro-Mo-tive Corp.\*, Apr 16 p 38 Orders, 1915-1935, Jan 2 p 139

Loewenberg, H. P.:

Improvements in Flexible Shaft Equipment\*, Apr 9 p 26

Lovejoy, John M.:

President American Institute of Mining and Metallurgical Engineers\*, Feb 27 p 21

Lovejoy Tool Works:

L-R Flexible Coupling, June 4 p 51

Ludium Steel Co.:

Annual Report, Mar 5 p 86 West Point Cadets Visit Plant\*, June 11 p 74

Lufkin Rule Co.:

Mezurall Rule, Mar 5 p 49 Lund, Dr. R. J.:

Bureau of Mines to Make Survey of Iron and Steel Scrap, Feb 6 p 37

M

MacDonald, J. Carlisle:

o Direct Public Relations Work of United States Steel Corp., June 4 p 78

Machine Elements:

Metallization of\*, Apr 9 p 49; Apr 16 p 31

Machinery:

Builders' Profits Since 1928\*, June 11 p 40 Canadian Treaty and Its Effect on, Jan 23 p 61 Design and Finish, Eye Appeal in\*, May 14 p 52

Machine Tools:

Assembly Control in Heald Plant\*, June 11 p 30
Century of, Feb 13 p 44
Design, Five-Year Revolution in\*, Jan 2 p 219
Industry, 1935, Jan 2 p 74
Modern, for the Toolmaker\*, Feb 13 p 36
Selling, June 11 p 45
Warner & Swasey New Installations\*, May 14 p 32
What Is Really Behind Improvement? Mar 12 p 42

Machining:

Aluminum Alloy Screw Stock, Feb 13 p 63: Mar 5 p 33 Car Axles\*, Mar 12 p 36 Cast-Iron Rear Bearing Re-tainer for Buick Model 40\*, May 14 p 47 Plymouth Flywheels\*, Apr 9 p 44 Stainless Steel, Tool Steel for, May 21 p 43 Transmission Cases for Buick Model 40 Car\*, May 7 p 32

Mackall, Paul:

Testimony at Basing Point Hearing, Apr 2 p 64

Mackintosh-Hemphill Co.:

Three-High Sheet Mill Order for Australia, Mar 19 p 105-D

MacLeod, Norman D.:

President, National Machine Tool Builders' Association\*, May 14 Insert

MacMillan, Neil E .:

Consumer Goods—An Expanding Market for Iron and Steel, Jan 2 p 78
Consumption of Non-Ferrous Metals, 1935, Jan 2 p 130

Madison-Kipp Corp.:

Model 7 Vertical Die Casting Machine\*, Jan 23 p 34

Magnetic Mfg. Co.:

Clutch Brake Record, Apr 16 p 52

Mahr Mfg. Co.:

Oil Regulating Valve, Feb 6 p

Maintenance: Minimizing Hazards of, June 4

Mall Tool Co.:

Flexible Shaft Diesinking Ma-chine\*, May 7 p 47

Malleable Founders Society: Convention Proceedings, June 25 p 96

Mallory & Co., P. R.: Expand Detroit Headquar-ters\*, June 4 p 80

Management:

Management:

Bethlehem Steel Co.'s Welfare Building\*, Feb 6 p 49
Employee Welfare Voluntary Programs, Apr 9 p 130
Ideas, Are Fundamental in Obsolescence, May 14 p 50
In Sales of Machine Tools, Apr 16 p 47
Manufacturing Methods, Inventory of Man-Power, Machines and Processes, Feb 13 p 57
Minimizing Hazards of Maintenance, June 4 p 46
Pension Disbursements by Bethlehem Steel Co., Feb 27 p 66

Bethlehem Steel Co., Feb 27 p 66
Route Card for Classifying Castings in Brown & Sharpe Plant\*, Jan 23 p 12
Standard Operation Record Cards\*, Jan 16 p 24
Steel Corporation's Program for Recruiting and Training Employees, Jan 2 p 149
Weirton Steel Co. Vacation Plan, June 4 p 78
Westinghouse Wage and Salary Plan, May 21 p 72
Working to Music\*, Apr 16 p 41

Manganese: Metallic, from Low Grade Ores, June 4 p 99

Manhattan Island:

Manipulator:

27,000,000 Tons of Steel in Present Use, May 14 p 74-G

Welded, for Jones & Laughlin New Blooming Mill, Jan 23 p 51

Manufacturing Methods: Inventory of Man-Power, Ma-chines and Processes, Feb 13

Marion Steam Shovel Co.: Grinding Manganese Steel Parts\*, Mar 12 p 46

Markers:

Stainless Steel Road\*, Mar 12

Marketing Rebuilt Products, Mar 5 p 40

Marking Machine:

Noble & Westbrok Radio Tube\*, June 4 p 55

Materials Handling:

Baker-Raulang Electric Truck for Picking Up Bundles of Steel Sheet\*, Jan 30 p 35 Cold Strip Coils at Campbell Works\*, Apr 16 p 43 Conveyor System for Hot Strip in McDonald Works\*, Mar 26 p 58

elid 25-ton Crane\*, Jan 30 p

Jan 30 p 34

Mathews Conveyor for Manufacturing Rubber Cushions\*, Jan 30 p 35

Mercury 10,000 Lb. High Lift Truck\*, Jan 30 p 35

Mercury Banty - Quad Gas Tractor\*, Jan 30 p 34

Progress in Industry\*, Jan 2 p 395

p 395 Robbins & Meyers Electric Hoist\*, Jan 30 p 34

Mathews Conveyer Co.:

Conveyor Dumping Unit\*, Feb 20 p 49

Continuous

Conveyors for Continuous Strip Mill Pickling Opera-tions\*, Feb 20 p 34 Equipment for Manufacturing Dunlapillo Rubber Cush-ions\*, Jan 30 p 35 Hexagon Shaft Roller Con-veyor\*, Mar 19 p 61

Mawhinney, M. H.:

Circular Furnace for Ingot Heating, Apr 30 p 45

McCall, M. M.:

Grinding Canadian National Driving Axle Journals\*, May 14 p 37 Machining Car Axles\*, Mar 12 p 36

McIntosh, F. F .:

Electric Furnaces and Their Part in Metallurgical Progress, June 4 p 34

McKaig, C. V .:

Testimony at Basing Point Hearing, Mar 19 p 76

McKay Building & Engineering Co.:

Welded Steel-Frame Buildings and Houses\*, Jan 23 p 27

McKee & Co., Arthur G .:

Biast Furnace Summary by Years, When Relined, Re-built or Built, Jan 30 p 55-A

McKennam, Philip M .:

Tantalum Carbide June 18 p 43

Measuring Standards:

Display, Jan 16 p 61

Mechanical Power Engineering Associates:

Power Transmissic tion, May 28 p 95 Transmission Resolu-

Medart Co.:

ontinuous Automatic Straightening and Polishing Machine\*, Feb 20 p 50 Continuous

Mehl, Robert F .:

Diffusion in Solid Metals, Feb 27 p 25

Mellott, M. K .:

New Open-Hearth Checker\*, Mar 19 p 44

Melmoth, Frank A .:

Steel Castings—Properties and Design\*, Feb 6 p 30

Merchandising:

Steel, Advertising's Place, May 28 p 46 Tool Steel, May 28 p 44

Mercury Mfg. Co.:

Banty Quad Gas Tractor\*, Jan 30 p 34 High-Lift Trucks\*, Jan 30 p 35; Mar 12 p 124

Merioa, Paul D.:

New Metals, Jan 16 p 18

Mesta Machine Co.:

Contracts for Jones & L lin Continuous Sheet & Laugh Apr 16 p 72 Unfilled Orders, Jan 2 p 151

Metal Finish:

Aspro, New, May 14 p 73 Developments, 1935\*, Jan 2 p 553; Jan 9 p 44

Metal Lath:

Revision of Standards Pro-posed, Mar 12 p 68

Metallizing:

Machine Elements\*, Apr 9 p 49; Apr 16 p 31

Metallizing Engineering Co.:

Metallization of Machine Ele-ments, Apr 9 p 49; Apr 16 p Metallizing Spray Gun\*, Mar 12 p 61

Metallography and Mechanical Tests:

Correlation Between, Feb 27 p

Metallurgy:

Achievements in 1935, Jan 16 rocesses in Iron and Steel\*, Jan 2 Insert Chart rogress in, Symposium\*, Jan 16 p 14

Coloring—Copper and Brass\*, Apr 16 p 25; Iron and Steel\*, Mar 26 p 48; White Metals\*, June 18 p 30 Manufacture Adds to Wealth of Nation, Jan 16 p 23 New, Developments in, Jan 16 p 18

p 18
Non - Ferrous, Consumption,
1935, Jan 2 p 130
Non - Ferrous Developments,
1935, Jan 2 p 173
Solid, Diffusion in, Feb 27 p 25

Metalwash Machinery Co.:

Internal Cleaning of Closed-End, Bottle-Neck Parts\*, Mar 19 p 36 Midget Metal Cleaning Unit\*, Jan 30 p 41

ressure, for New Plate of Carnegie - Illinois Corp., June 25 p 94 Pressure,

Michigan Tool Co.:

Gear Testing Machine\*, June 4 p 52 Mitco Pin Splice Turning Tools\*, Feb. 6 p 40 Plant Expansion and Improve-ments\*, Apr 9 p 108

Microscope:

Bausch & Lomb Spectrum Measuring\*, Mar 5 p 50

Midwest Piping & Supply Co.:

Arc - Welded Air - Powered Scoop\*, Mar 5 p 36 Van Stoning and Bending Pipe with Gas-Fired Fur-naces\*, Feb 6 p 34

Milholland Sales & Machine Co.: Automatic Drilling Machine, Improved No. 3, Apr 16 p 51

Miller Electric Mfg. Co.:

Dial Switch Control for Arc Welders, Mar 12 p 124

Miller, Ralph E .:

Machining Feed Worm Wheel\*, Apr 9 p 31 Welding and Cutting Develop-ments\*, Jan 2 p 496; Jan 9 p

Milling Machines:

Dalrae Cradle Mounting for End Attachment\*, Feb 27 p

49
Davis & Thompson DrumType\*, Feb 27 p 46
Defiance Horizontal Two-Way
Hydraulic\*, Mar 5 p 51
Dreses Stationary Table Horizontal\*, May 21 p 50
U. S. Semi-Automatic or Hand
Operated, Apr 16 p 49

Mine Safety Appliance Co.: Hydrogen Sulphide Detector, May 28 p 58

Philadelphia Gas-Air, Jan 30

Modernization:

A Profitable Fire, Mar 12 p 32 Gisholt Revamped Plant\*, Feb 13 p 45 Shall We Quit or Modernize? (Prize Contest), Feb 13 p 34

Modern Machine Tool Co.:

Cut-Off Machine, 4½-In., Mar 19 p 58

Moeschi, Frank A.:

Testimony in Basing Point Hearing, Mar 19 p 76

Moffett, L. W .:

offett, L. W.:

New Deal in 1935, Jan 2 p 92

Week in Washington, Jan 2
p 160; Jan 9 p 58; Jan 16
p 42; Jan 23 p 43; Jan 30
p 44; Feb 6 p 52; Feb 13 p
66; Feb 20 p 56; Feb 27 p 58;

Mar 5 p 58; Mar 12 p 62;

Mar 19 p 66; Mar 26 p 66;

Apr 2 p 60; Apr 9 p 60; Apr
16 p 60; Apr 23 p 58; Apr 30
p 56; May 7 p 60; May 14
p 60; May 21 p 58; May 28
p 60; June 4 p 64; June 11
p 60; June 4 p 64; June 15
p 82

Molding:

Tire Machine Table Mold Sim-plified\*, Mar 26 p 40

Molding Machines:

Herman Hi-Speed Jarr Roll-over\*, Jan 30 p 43 Tabor Improved, Feb 27 p 49

Monarch Engineering & Mfg.

Lip Pouring Furnace\*, Jan 30 p 42

Monarch Machine Tool Co.:

Semi-Automatic Lathe\*, Jan 16 p 34

Monument:

Hi-Jolly\*, June 11 p 44

Moore, H. F .:

Correlation Between Metallog-raphy and Mechanical Test-ing (Howe Memorial Lec-ture)\*, Feb 27 p 26

Morse Chain Co.:

Silent Chain Drive Calculator, Jan 30 p 42

Motion Pictures:

Making Alloy Steel, Apr 2 p 68 Steel Used in Production of, 1935, Apr 9 p 85

Motodrive:

Reeves Variable-Speed Motor-ized Unit\*, Apr 16 p 50

Motor Base:

Allis-Chalmers Automatic, Apr 9 p 95

Motor Carrier Servicing Corp.: Organized, Apr 30 p 66

Motor Improvements, Inc.:

ir Separator for Sandblast Mask, Apr 16 p 49

Imperial Squirrel Cage ½ to 200-Hp., Mar 19 p 56 Westinghouse New Line, SK Type, May 14 p 74-E

Muller and Harant:

Anodic Pickling of Iron and Steel, Apr 30 p 42

Muller, Irving B.:

Photographs of Early Historical Blast Furnaces\*, May 28 p 38

Murphy, John A .:

Market Studies Uncover New Steel Uses and More Steel Profits\*, May 28 p 27 Selling Rebuilt Products, Mar 5 p 40; Apr 16 p 47

Museums:

Industrial, and Industrial Edu-cation\*, Apr 2 p 26

Music:

Working to\*, Apr 16 p 41

N

National Acme Co.:

Multiple-Spindle Chucking Ma-chine, Model RP\*, Jan 23

National Association of Purchasing Agents:

Convention Proceedings, May 28 p 82

National Broach & Machine Co.: Gear Tooth Crowning Ma-chine\*, Mar 19 p 58

National Housing Act:

Amendments, Apr 16 p 64

National Industrial Conference Board: 5-Day Week in Busine 5-Day Week in Busine 5-Day Week in Busine 5-Day Week in Busine

Analysis of Executive Salaries, Mar 12 p 54 Booklet on Townsend Plan,

Mar 12 p.
Booklet on Towns
Mar 19 p 105-D
Business, 1935, Feb 6 p 91
Economic Security, Private
Plans for, Jan 30 p 27
Employee Training, Jan 23 p

21 Employee Welfare, Voluntary Programs, Apr 9 p 130 Per Capita Production, 1935, Apr 23 p 80 Ratio of Tax Collections to National Income, 1932 to 1934, Jan 9 p 63 Taxes, Proposed Corporate, Apr 2 p 106 Unemployment and Unemplo

Unemployment and Unemployunent Relief, Apr 30 p 106 Unemployment, November, Jan 2 p 150; December, Feb 6 p 57; January, Mar 26 p 82; March, Apr 30 p 63 Wages Not Cut Since End of NRA, Jan 30 p 49

National Labor Relations Board:

Acts Against Columbia Radia-tor Co. and Foster Brothers Mfg. Co., June 11 p 67 Hearings in Jones & Laughlin Case, Mar 12 p 68 Orders Election at Interna-tional Nickel Plant, June 18 p 59

Orders Elections for Collective Bargaining at Pittsburgh Steel Co. Plants, Feb 27 p

Rules Against Columbia Enameling & Stamping Co., Feb 27 p 94

National Machine Tool Builders' Association:

Convention Proceedings, May 14 p 80

Receives American Trade Association Executives' Award,
May 7 p 70

ional Metal Congress and Exposition: National

Annual Meeting Announce ment, Jan 16 p 58; May 7

National Metal Trades Associa-tion:

Mar 19 p 90 Convention Proceedings, Apr 30 p 38 Cincinnati

National Recovery Administra-

tion: Price Control Studies, Feb 20

National Steel Corp.:

Annual Report, Mar 19 p 105-B National Supply and Machinery Distributers Association:

Convention Proceedings, May 21 p 66

New E

In

Neu

Nea

V

New Re

N Niag Sq

Nich

R

Nick Nile Bu To

Nile Ac Nitr Ne

Nob

Ra

Ba Nort

De

Nory St Ar

Nuti

Obit

Ad An Au Au Au Ba Be Be

Edu-

Nealey, J. B.:

New Deal:

Neudoerfer, John L .:

New Jersey Zinc Co.:

Newton Steel Co.:

Nicholson File Co.:

Nickel:

Nitriding:

Norbury, A. L.:

Norton, Paul T., Jr.:

Numbering Machines:

Norton Co.:

Forging and Heat Treating Locomotive Parts\*, Mar 19 p

Van Stoning and Bending Pipe with Gas-Fired Furnaces\*, Feb 6 p 34

Testimony at Basing Point Hearing, Mar 19 p 73

AAA Declared Unconstitu-tional, Jan 9 p 65-D Echoes from 'Horse and Buggy' Days\*, Jan 23 p 38 In 1935, Jan 2 p 92 Letters For and Against, June

Cronak Coating Process, May 28 p 94

Republic Steel Co. Plans Fore-closure Against, Apr 30,p 66

Beltpaco Transmission Belt, June 4 p 54 New Line Air Hose, Apr 30 p 106

Niagara Machine & Tool Works: Inclinable Press for Light Stampings, Feb 27 p 48 Squaring Shears, Improved BL Power, June 25 p 75

New File Teeth Design\*, Jan 16 p 37

World Consumption, 1935, May 28 p 114

Burt, Clayton R., President\*, June 25 p 90 To Merge with General Ma-chinery Corp., Mar 26 p 110

Acquired by Republic Steel Corp., Apr 23 p 68

New Developments\*, Jan 2 p 472; Jan 9 p 17

Radio Tube Marking Machine\*, June 4 p 55

Balanced Blast Cupola, Jan 16

50th Anniversary, Jan 23 p 50

Depreciation and Corporate Surpluses\*, May 7 p 36

Stainless Steel Works to be Built in, Jan 30 p 55-C; Feb 6 p 89

American Portable, Feb 27 p

Cooke Microslotted\*, Mar 26 p

0

Noble & Westbrook Mfg. Co.:

Niles-Bement-Pond Co.:

Niles Steel Products Co.:

New York Belting & Packing Co.:

an 23

e Co.: Ma-

64 erence

91 Private 7 n 23 p untary

porate, mploy-106 er, Jan eb 6 p p 82;

ollective tsburgh eb 27 p

gs. May

nounce-May 7 p

gs. Apr

ninistra-

p 105-B achinery tion: gs. May

Adams, John M., Feb 13 p 74 Anderson, William B., June 4 p 72 Andrews, Jay I.\*, Apr 23 p 66 Austin, Henry L.\*, May 7 p 74 Austin, Samuel\*, May 28 p 95 Bartol, George, Apr 9 p 89 Beale, Sir John F., Feb 6 p 65 Belden, William B., Jan 9 p Belknap, Robert E., June 18 p

Bethel, Claude, May 7 p 74 Blotter, Richard G., Mar 26 p Botfield, Leonard B., May 28 Brown, J. Stuart, Mar 19 p 105-A

Brunner, John, June 18 p 70 Butterworth, William F., June 18 p 69 Clark, Dwight, Jan 9 p 65-B Clemson, Daniel M., Apr 16 p 74 Collins, Charles F., Jan 9 p 65-B

Conant, Frederick W., Feb 13 p (5 ousins, Robert W., Feb 27 p 74 rawford, George G.\*, Mar 26 p 84 Cronk, Andrew S., May 28 p 95 Cullen, William B., June 25 p

Delack, Burton L., May 14 p 74-G 74-G Deming, Fred C., Jan 23 p 53 Derschug, John N., June 18 p 70 Diegel, Henry, Apr 9 p 89 Dill, Raymond, Mar 26 p 84 Douthitt, Walter D., Apr 30 p

71 Ekstrom, Erick S., Jan 23 p 53 Ellis, Edwin E.\*, Mar 19 p Ellis, Edwin E.\*, Mar 19 p 105-A Espen, Jack, Jan 16 p 60 Feltes, George H., May 14 p 74-F

Ferris, James E., Mar 5 p 71 Fell, Chester W., Feb 27 p 74 Folsom, William H., Feb 6 p 65 Forbes, William A.\*, Apr 16 p Forg, Herman, Mar 5 p 71 Frohman, E. H., Mar 19 p 105-A Furness, Radclyffe, Feb 6 p 65 Gallagher, John E., Apr 16 p

75 Garrity, James E., Mar 5 p 71 Gilmore, William J., Mar 19 p 105-A Gladding, Nelson A., Mar 19 p

Gleason, William P., June 18 p Glessner, John J., Jan 30 p 55-D 55-D Goff, James, Jan 9 p 65-B Gould, Charles A., Feb 6 p 65 Gray, Charles W., Feb 6 p 65 Griffith, William G., Apr 23 p

66
Guy. Glen E., June 18 p 69
Haefner, Clyde A., Mar 19 p
105-A
Hart, Harry U., Apr 16 p 75
Hawk, William B. N., June 18
p 70
Headford, Edward H., Feb 6

Headrord, Edward H., Feb 6 p 65 Henley, John, Feb 13 p 74; Feb 20 p 64 Hetherington, George B., Feb 20 p 65 Hitchcock, W. J., Mar 19 p

Hoag, Frank D., May 7 p 74
Hoag, Frank D., May 7 p 74
Hoag, George, June 25 p 95
Horix, Otto, May 7 p 74
Horning, H. L.\*, Jan 9 p 65-B
Hull, Woodward J., Jan 16 p

Hunter, P., Feb 13 p 74
Ickes, Elwood T., Apr 23 p 66
Ingersoll, Stephen A., May 28
p 95
Irwin, Charles A., June 18 p 70
James, George, Mar 26 p 84
Jones, A. C., May 14 p 74-G
Junkin, John C., June 25 p 95
Kaplan, Max S., Feb 6 p 65
Katelman, Julius, Apr 30 p 71
Kavsing, William G., Jan 9 p
Kennedy, John K. Feb 87

Kennedy, John K., Feb 27 p 74 Kirby, Daniel B., Jan 16 p 60 Krause, August W., June 25 p Lange, Frederick A., Feb 13 p

Larsson, C. G., Emil, Apr 16 p

75
Lean, Kenneth, Feb 20 p 65
Llovd, William F., June 18 p 76
Lockwood, Charles S., Apr 9 p 89
Lomb, Henry C., Apr 2 p 73
Loucks, James F., Mar 19 p 105-A
Low, Frederick R., Feb 6 p 65
MacGregor, William\*, Jan 9 p 65-B
MacMorris, John W.\* MacMorris, John W.\*, June

Magee, John F., Feb 20 p 65 Marsh, Joseph W., Feb 13 p 76 Martin, Cecil, June 4 p 72 Matthews, John G., Mar 5 p 71 McClain, Will, Jan 30 p 55-D McClure, James W., Feb 13 p McCombs, Charles E., Jan 30 p

55-D McCormick, Cyrus H.\*, June 11 p 79; June 18 p 70 McFate, William M., Feb 6 p McGregor, William H., May 14 p 74-G

McNally, Joseph P., Mar 19 p 105-A Means, John H., Feb 27 p 74 Meissner, Maj. James A., Jan 30 p 55-D Mesker, Bernard T., Feb 6 p

Miller, Leonard B., June 18 p Miller, William W., Jan 9 p Mitchell, James F., June 18 p Mittinger, George E., Mar 26

p 84 Moore, Walter H., Apr 16 p 75 Morey, Arthur T., May 21 p 69 Morss, Henry A., May 14 p 74-G Mueller, Oscar W., Feb 13 p

Naismith, George, May 7 p 74 Nash, John M., Mar 19 p 105-A Newton, Duane H., June 18 p 69 Nieman, Albert C., Jan 9 p 65-B Obermier, J. G., Jan 9 p 65-B O'Brien, Miles W.\*, Apr 2 p

73 Olmstead, Clarence J., Apr 2 p 73 Parker, Harry B., Feb 20 p 64 Patterson, Lincoln B., June 4

p 72 Perkins, Henry, May 21 p 69 Perkins, Herbert F., Feb 13 p Petch, Joseph J., Feb 20 p 64 Pilling, John W., Jan 16 p 60 Pinkham, Stephen H., Mar 19 p 105-A Plummer, Sydney G., Jan 16

p 60 Powers, Frank A., Feb 6 p Price, John F., June 18 p 70 Quay, Richard R., Feb 6 p 65 Rawlings, Harold C., June 18 Reeby, William H., Mar 19 p Reinhard, Louis F., June 18 p 69 Roberts, George G., Feb 6 p Roberts, Millard J., June 25 p Robinson, Arthur E., Mar 19 p

105-A Roebling, Ferdinand W., Jr., June 4 p 72 Rorty, Col. Malcolm C., Jan 23 p 53 Rust, Henry B.\*, Jan 30 p 55-D Salmon, Wilmer W., Feb 6 p 65 Sargent, Joseph D., Apr 16 p

Sawyer, Willard N., Jan 16 p Schall, James E., Apr 23 p 66 Schneider, Edward J.\*, Feb 13 p 74 Schultz, Otto G., Feb 13 p 74 Scott, Marshall R., June 25 p

Severance, John L., Jan 30 p 55-D Shepherd, A. B.\*, Jan 30 p 55-D 55-D Shore, Albert F., Feb 6 p bō Simpson, W. P., Feb 20 p 64 Singer, John B., Jan 16 p 60 Skeen, Dawson H., Mar 5 p 71 Smith, Sydney A., June 4 p

Stegeman, William F., Jan 16 p 60 Stokes, William H., June 4 p 72 Swindlehurst, Harry, Mar 26 p 84 Sylvester, J. P., June 4 p 72 Thompson, Wallace, Jan 16 p

p 53 Tuthill, Frank H., Mar 5 p 71 Vincent, Clive B., Feb 13 p 76 Walker, Arthur W., Jan 16 p Wallner, Lucas, Apr 2 p 73 Walthall, J. L., June 4 p 72 Wells, Frederic E., Feb 20 p White, Frederick R., May 21 p 69 Whittemore, Ernest W., Jan 16 p 60 Williams, John C.\*, June 4 p Winsnes, Fred, Feb 20 p 65

Tredennick, Harry L., Jan 23

O'Brien, D. C .: Sheet Metal Shops Outlet for Stainless Steel, Feb 13 p 80

Management Ideas Are Funda-mental in, May 14 p 50

Oglebay, Norton & Co.: Acquire Dock at Saginaw, Mich., June 4 p 81 Add Two Vessels to Fleet, Mar 26 p 106 Remodeling Ore Freight Ves-sel, Feb 20 p 63

Ohio Electric Mfg. Co.: Magnetic Separation of Black Sheets After Annealing\*, June 18 p 49

Ohio Machine Tool Co.: Shaping Machine, Group Controls\*, May 7 p 48

Fuel, Proposed Pennsylvania Tax, May 28 p 72

Oil Conditioner: On Ford V-8 Engine\*, Apr 30 p 54

Oil Distribution: Portable Plant for\*, Jan 23 p

Oilers:

Lidseen, Force Feed and Pump Type\*, May 7 p 48 Oil Gear Co.:

Hydraulic Power Press\*, May 7 p 47 Simplified Variable Speed Transmissions\*, Mar 26 p 55

Oil Industry: Proposed Expenditures, May 28 p 75

Oil Reservoir: Landis Ring Type\*, Feb 20 p

O'Leary, John W .: Condemns Corporation Surplus Tax Bill, May 7 p 64
Private Investment Is Key to
Capital Goods Revival, Jan
9 p 47

Oliver, Frank L .:

Brackelsberg Melting Furnace in Kelsey - Hayes Plant\*, Apr 9 p 46
Combined Operations in Special-Purpose Machines in Buick Plant\*, May 14 p 47
Detroit Editor of THE IRON AGE\*, Jan 2 p 426
Machining Transmission Cases for Model 40 Buick Car\*, May 7 p 32
Progress in Detroit's Apprenticeship Program, Apr 16 p 34

Oliver Instrument Co.:

Tool and Cutter Grinder\*, Apr 23 p 51 Twist Drill Grinder, Mar 12 p 124

Open-Hearth Executives: Convention Proceedings, Apr 23 p 40

Ore, Iron:

Distribution, 1935, June 11 p 46 Imports and Sources of Sup-ply, November, Jan 9 p 51; December, Feb 6 p 50; Janu-ary, Mar 19 p 105-C; Febru-

rchas-

, May

, 1935,

End of

Radiaaughlin

m b i a Builders'

ss and

Meeting.

Feb 20

ary, Apr 9 p 111; March, May 14 p 74-H; April, June 11 p 96 Lake Superior Iron Content, 1935, Apr 30 p 66 Lake Superior Shipments, 1935, Jan 9 p 57; Feb 20 p 55

Ore. Manganese:

Imports and Sources of Supply, November, Jan 9 p 51; December, Feb 6 p 50; January, Mar 19 p 105-C; February, Apr 9 p 111; March, May 14 p 74-H; April, June 11 p 96

Otis Steel Co.:

Mar 19 Neport. Annual Report, Ma 105-B: Quarterly Apr 23 p 70

Owen-Dyneto Corp.:

Manufacturers of USL Arc Welders, Feb 20 p 68

Owens-Illinois Glass Co.:

Glass Air Filter, Apr 9 p 42

Oxyacetylene Flame:

se in Manufacture of Air-plane Struts, Feb 6 p 56

P

Packaging Contest:

Awarded to Five-Star Anti-freeze Container, Mar 26 p

Lamson & Sessions Co. Wins Second Prize,\* June 4 p 61

Packer Machine Co.:

Continuous Polishing and Buffing Machine, 14 Heads,\* Mar 19 p 59

elivered to Spray Guns Through Pipe Lines\*, Jan 23 Delivered to D 15

Palmer-Bee Co.:

Pillow Block, May 21 p 50 Speed Reducer and Gearing Catalog, May 28 p 58

Palmer, Frank R .:

Electric Furnaces and Their Part in Metallurgical Prog-ress, June 4 p 32

Pantograph Machine:

Gorton New Die Cutting\*, Apr 23 p 48

Parker, E. L .:

Testimony at Basing Point Hearing, Mar 19 p 73

Parts on Contract, Jan 2 p 519

Pasiode Co.:

Stapling Machine\*, Feb 6 p 43

Patenting Unit:

Fourth Installation at Bethle-hem's Maryland Plant\*, Apr 30 p 84

Patents:

Arnott Hydraulic Bench Vise, Jan 30 p 43

Patterson Foundry & Machine

New Motor Drive\*, May 28 p UC Agitator, Feb 20 p 50

Paving Blocks:

Interlake Iron\*, Feb 6 p 62

Paving Plates:

Bethlehem Steel\*, Feb 6 p 62

Pazzatti, V. J., Jr.:

Developments in Open-Hearth Furnace Design and Opera-tion, June 4 p 42

Pease Co., C. F .:

Blue-Printing Machine, Model 7, Feb 20 p 47

Peck, Stow & Wilcox Co.:

Curling Machines, Horizontal Single and Double End\*, Mar 19 p 57

Pennsylvania Railroad:

Forging and Heat Treating Locomotive Parts\*, Mar 19 p 38

Pensions:

Disbursements by Bethlehem Steel Corp., 1935, Feb 27 p 66

Perolator:

ir Separator for Sandblast Mask, Apr 16 p 49

Perry, Lieut. Commander E. B.: Benefits of Radiographic Cast-ing Exploration\*, Apr 30 p

Pettinos, George F., Inc.:

Aggregate to Withstand High Frequency Currents, Apr 9

Pew. J. Howard:

Government in Business, Jan 16 p 48

Philadelphia Drying Machine

Proportional Gas-Air Mixer, Jan 30 p 41

Pickling:

Anodic of Iron and Steel, Apr 30 p 42

Capacity, 1935, Mar 12 p 86
Imports by Countries of
Origin, November, Jan 9 p
51; December, Feb 6 p 50;
January, Mar 19 p 105-C;
February, Apr 9 p 111;
March, May 14 p 74-H;
April, June 11 p 96
Production, 1935, Mar 26 p 89
Production, December, Jan 9
p 65-C; January, Feb 6 p
66; February, Mar 5 p 70;
March, Apr 9 p 56; April,
May 7 p 90; May, June 4 p
100

World Production, 1935\*, Jan 2 p 100

Piling, Sheet Steel:

Federal Trade Commission Reports on Alleged Collusive Bids, June 25 p 88
Government Withholds Award from Jones & Laughlin Steel Corp., June 18 p 70; June 25 p 82

Sheet Steel, Carnegie-Il-linois, Feb 20 p 36

Pillow Block:

Palmer-Bee Self-Alining, May 21 p 50

Ceramic, Flexlock Rubber Joint for, Apr 2 p 35 Plant Layouts, Jan 9 p 42 South African Dumping Duty on, Apr 9 p 66 Van Stoning and Bending with Gas-Fired Furnaces, Feb 6 p 34

Pipe Lines:

For Delivering Paint to Spray Guns\*, Jan 23 p 15

Pistons:

Elliptical Skirted, Manufacture of, Apr 30 p 49 Fitting Bore to\*, Apr 2 p 57

Pittsburgh Coal Co.:

Addition to Tow-boat Fleet\*, June 4 p 82 Exchanges Coal Facilities with H. C. Frick Coke Co., Feb 27

Pittsburgh Steel Co.:

Hearing on Company Elec-tion, Jan 16 p 48 NLRB Orders Elections for Collective Bargaining, Feb 27 p 96 Roemer, Henry A., President\*, Jan 16 p 68

Baldwin-Southwark for Navy Yards\*, Jan 23 p 33 Rockford Hydraulic\*, Apr 16

Plastics:

Competitor or Ally?\*, Mar 19 p 32 Developments in\*, Jan 2 p 520

Bethlehem Steel Paving\*, Feb 6 p 62

Plating Equipment:

Udylite New\*, June 4 p 53

Plymouth Motor Corp.:

Machining Flywheels\*, Apr 9 p 44 Polishing Machine:

Packer Continuous with 14 Heads\*, Mar 19 p 59 Polushkin and Fink: Microscopic Study of Ancient Bronze and Copper\*, Feb 27

p 34

Pontiac Motor Co.: Making Radiator Grilles\*, Feb 27 p 56

Porter-Cable Machine Co.:

Carbo-Lathes, Central Control\*, Feb 27 p 49 Head

Portevin, Albert:

Refining of Steel, Rapid, Jan 16 p 19

Potts Co., Horace T.:

Reorganized, Jan 9 p 65-C

Industrial Plant\*, Jan 2 p 576 Progress in Mechanical Trans-mission, Jan 2 p 361; Jan 9

P 30 Sundstrand Hydraulic Unit\*, Jan 23 p 34 Transmission Group Resolu-tion, May 28 p 95

Power Transmission Council: Resolution, May 28 p 95

Pratt & Whitney Co.:

Flexible Shaft Equipment Improvements\*. Apr 9 p 26

Prentiss, Fred L.:

Chassis Assembly Line in White Motor Plant\*, Mar 19

p 28 Forming and Forging Industry, 1935\*, Jan 2 p 309; Jan 9

p 36 Hot-Strip Conveyor System in McDonald Works\*, Mar 26

mass Production of Parts for Crosley Refrigerator Cab-inets\*, June 11 p 34

Pressed Steel Car Co.:

Reorganization Plans, Jan 9 p 63

Presses:

resses:

Ajax Forging, with HighSpeed Hydraulic Clutch\*,
Feb 20 p 49

American Broach Straightening\*, Mar 19 p 61

Baldwin-Southwark S30-Ton
Triple - Action Hydraulic\*,
Mar 5 p 49

Cleveland Blanking and Forming\*, Jan 30 p 40

Farrel-Birmingham Hydraulic
Molding\*, Feb 6 p 41; Mar
19 p 60

For Shaping Ford V-8 Body
Panels in One Operation\*,
Jan 23 p 28

Panels in One Operation\*, Jan 23 p 28 Niagara Inclinable for Light Stampings, Feb 27 p 48 Oil Gear Hydraulic Power\*, May 7 p 47 Toledo Automatic Multiple-Slide\*, Jan 23 p 32 Trends in Production of\*, Jan 2 p 327 Zeh & Hahnemann Punch for Light Pressure\*, May 21 p 51

Press Brake:

Boom Large All-Welded Steel\*, Apr 23 p 50

Pressuremeter:

United Engineering & Foundry Co., May 28 p 59

Pressure Vessels:

mith Large Fractionating Equipment\*, Feb 6 p 43 Smith

Alloy Steel Bars, Slabs and
Blooms, Quantity Extras,
Mar 19 p 78
Bars, Republic Quantity Differentials, Mar 12 p 113
Control, NRA Studies, Feb 20
p 60
Farm, Nearen, 40 Per 100

P 60
Farm Nearer to Pre-1929
Averages Than Sheet Steel,
Apr 2 p 90
Federal Trade Commission
Reports on Alleged Collusive
Bids, June 25 p 88
Sheet Item Extras, Jan 2 p

Sheets. Republic Quantity Differentials, Mar 12 p 113 Spring Steel, Carbon, Apr 9 p 93

Spring Steel, Extras on Cold Rolled, Apr 16 p 67 Tool Steel Advanced, June 4 p 95

Priestley, W. J.:

Columbium, New Alloying Ele-ment, Jan 16 p 20

Processes:

New in 1935, Jan 16 p 21

Production:

Aids to, Jan 2 p 590 Per Capita, 1935, Apr 23 p 80

Production Instrument Co.: Compact Switch\*, June 4 p 55

Production Statistics:

Aircraft, First Quarter, June 18 p 60
Ferroalloys, 1935, Mar 26 p 89
Pig Iron, 1935, Mar 26 p 89
Pig Iron Output, World, 1935\*,
Jan 2 p 100
Rails, 1935, Apr 9 p 113
Sheet and Strip Steel, 1935,
June 4 p 118
Steel Castings, May 7 p 92
Steel, Finished, 1935, May 7 p
92
Steel Ingot and Costings On

Steel Ingot and Castings Out-put, World, 1935\*, Jan 2 p

Steel Ingots, 1935, May 7 p 92 Steel Ingots, December and Year, Jan 9 p 65-D; January, Feb 13 p 82; February, Mar 12 p 74; March, Apr 9 p 95; April, May 14 p 74-F; May, June 11 p 106
Steel, Per Family, 1935, Feb 20 p 66
Steel Products for Sale in Fourth Quarter and Year 1935, Feb 20 p 70
Steel, World, 1935\*, Jan 2 p 98

teel, World, United States Share of, June 4 p 81

Profiling Machine: Engineering & Research and Hamilton Airplane Propel-ler\*, Feb 6 p 44

Profits:

Machinery Builders', Since 1928\*, June 11 p 40 Progress:

Symposium\*,

Metallurgical, Jan 16 p 14

Propane: Ford Mixing Station\*, Apr 9 p

Prosser & Son, Thomas: Cemented Carbide Tool Grind-er\*, Mar 5 p 52 Discontinues Importation of Widla Cemented Carbides. May 21 p 70

Pumps:

rown & Sharpe Rotary Geared with Helical Gears\*, Brown

Jan 23 p 37 Hydraulic Radial, 4R\*, June 25 p 74 Roper Steel Mill Lubricating\*. Jan 16 p 35

Purdue University:

Housing Survey, Mar 5 p 38

Queer Sta

Pylum

Alui 42

Pyron

Fox

Quehl Neo Quick Star

> Racks Bar Railre Buc

> > Cos

A

Equ Exp Illin Lig

Sai

Rails

Lo Mit Pro Tra Raily

Ram Rans Tu

Rasr Ra Rast Ma Rayl

> Rebu Se Reco

St Red Ad ating

and ctras, Dif-Dif-3 eb 20

ission lusive

2 p antity of 113 or 9 p Cold une 4

Ele-

p 80 4 p 55 June

5 p 89 1935\* 1935.

out-n 2 p 7 p and Janu-ruary, Apr 9 74-F;

, Feb le h Year n 2 p States h and

ince sium\*.

Grindon of rbides.

pr 9 p

Rotary lears\*, June

5 p 38

ating\*

Pylumin Process:

Aluminum Coating, Apr 2 p

Pyrometers:

Foxboro Improved, Feb 27 p 45

Q

Queen Mary:

Stainless Steel in Kitchens\*, Apr 2 p 43

Quehl Sign Co.:

leon Sign, Stainless Steel Letters\*, May 21 p 45

Quickwork Co.:

Stamping Trimming Ma-chines\*, Jan 16 p 37

R

Racks:

Barrett-Cravens Barrel, Mar

Railroads:

Railroads:

Budd, Edward G., Warns Against Loss of Train Strength, May 7 p 105
Costs, M. J. Gormley Protests Additions to, June 25 p 98
Elgin, Joliet & Eastern Hauling Case, Jan 23 p 46; May 26 p 70; May 28 p 64
Equipment Buying in 1935\*, Jan 2 p 56
Expenditures for Fuel, Materials and Supplies, 1935, Apr 9 p 83
Illinois Central Green Diamond Streamlined Diesel-Electric Train, Apr 16 p 71
Light Weight Equipment and, Feb 27 p 38
Light-Weight Equipment, Completed or Ordered, 1935, Jan 2 p 139
Santa Fe's New Stainless Steel Day Coach, Feb 13 p 84
Rails:

lails:

Cooling, Bethlehem to Control
Process, Apr 23 p 70
Heat Treating at Bethlehem
Plant\*, June 18 p 34
Long-Length Made by Thermit Welding, Jan 2 p 502
Mitred Ends\*, June 18 p 34
Production, 1935, Apr 9 p 113
Transverse Fissures\*, June 18
n 34

34 Trolley Track, Nickel-Copper Steel Test\*, Feb 20 p 62

Railway Express Agency: Air Delivery Service\*, Feb 27 p 50

Ramp, Herbert M.:

Examining Foundry of To-morrow Through Spectacles of Imagination, Apr 30 p 26

Ransohoff, Inc., N.:

Tumbling Equipment for Foundry Cleaning\*, Apr 30 p 36

Rasmussen, Louis:

Railroad Spike\*, May 28 p 58

Rastall, W. H.:

Machinery Builders' Profits Since 1928\*, June 11 p 40 Raybestos-Manhattan, Inc.:

V-Belt Drive for Airplanes, Test, Mar 5 p 49

Rebuilt Products:

Selling, Mar 5 p 40; Apr 16 p 47

Record Cards:

Standard Operation\*, Jan 16 p 24

Redhead, J. H.:

Address at Detroit Foundry-men's Meeting, Mar 26 p 80

Redmond Co., A. G.:

Small Speed Reducer, Jan 16 p 37

Reed-Prentice Corp.:

Die Casting Machine for Brass Alloys, Mar 19 p 58

Reed, Thomas T .:

Iron Castings, Largest and Oldest\*, Apr 30 p 18

Reel Stand:

Stanley, Feb 6 p 40

Reeves Pulley Co.: Motodrive, Variable Speed\*, Apr 16 p 50

Refractories:

Bailey New Open-Hearth Checker Brick\*, Mar 19 p 44 Developments in\*, Jan 9 p 20

Refrigerating Machinery Association:

Convention Proceedings, May 28 p 74

Refrigerator Cabinets:

Crosley, Mass Production of Parts for\*, June 11 p 34

Regulators:

General Electric, Transformer Speed, Feb 27 p 45

Reinartz, L. F .:

Developments in Open-Hearth Furnace Design and Opera-tion\*, June 4 p 36

Automatic Furnace Tempera-ture Controller\*, Apr 16 p 50

General Electric High-Speed and Thermal Induction, Feb 27 pp 44, 45

Relyea, J. D.: Standard Operation Record Cards\*, Jan 16 p 24

Republic Steel Corp.:

Acquires Canton Tin Plate Corp., June 11 p 70
Acquires Niles Steel Products Co., Apr 23 p 68
Advertising Personnel, Changes, May 14 p 96
Annual Report, Feb 6 p 58; Mar 5 p 66; Apr 9 p 85
Caskey, L. L., Philadelphia Sales Manager, Apr 23 p 83
Employee Representation Vote, June 18 p 48
Leases Indianola Mine, June 11 p 114
Moving Offices to Cleveland, Jan 2 p 156; Jan 23 p 71
Not Acquiring Wickwire Spencer Steel Co., Mar 12 p 77
Officers Honored by Cleveland Advertising Club, Jan 9 p 79
Plans Foreclosure Against Newton Steel Co.: Apr 30 p 66

Quantity Differentials on Sheets and Bars, Mar 12

p 113 ant Improvements and New Construction Program, Feb 6 p 60; Mar 5 p 6; May 7 p 72; June 4 p 83 o Give Vacations with Pay, May 14 p 86

Cost of Steel Industry's Pro-gram, May 14 p 74 Market, Uncovers New Steel Uses and More Profits\*, May 28 p 27

Catalin, Synthetic, Parts Pro-duction\*, Apr 9 p 34

Reynolds Corp.: System of House Construc-tion\*, Mar 19 p 53

Richberg, Donald R.:

Defends Basing Point System, Mar 12 p 66; Mar 19 p 74

Motor Vehicle, Manufacture of\*, Apr 9 p 38

Hannifin Rapid Hydraulie\*, June 4 p 50 Hanna High-Speed Hydrau-lic\*, May 7 p 50

Robbins & Meyers, Inc.: Electric Hoist\*, Jan 30 p 34

Robertson Co., H. H .:

Cellular Heavy-Duty Bridge Deck\*, Mar 5 p 43

Robinson Bill: Passed by Senate, May 7 p 66

Rockford Drilling Machine Co.: Hydraulic Drilling Machine Tooled for Crankshafts\*, Apr 2 p 51 Hydraulic Planer\*, Apr 16 p 48

Roemer, Henry A .:

President Pittsburgh Steel Co., Jan 16 p 68

Cold Forming of Shapes\*, Jan 2 p 442

Rolling Mills:

Rolling Mills:

96-In. Strip, Great Lakes Steel
Corp. Begins Operations of,
Mar 26 p 112
Carnegie-Illinois Strip at McDonald\*, Feb 20 p 44
Continuous Sheet and Wide
Strip, Installations and Capacities, Jan 2 p 85
Continuous Sheet—What They
Mean to Costs and Competition\*, Jan 2 p 82
Developments in, Jan 2 p 430
For Cold Forming\*, Jan 2 p
442
Three-High Sheet for Austral

Three-High Sheet for Austra-lia, Mar 19 p 105-D

Rolls:

Pressure, Controlling, Apr 30 p 46

Ford, for Light and Ventila-tion, Feb 27 p 50

Roosevelt, Franklin D.:

Echoes from "Horse and Buggy" Days of 1930\*, Jan 23 p 38

Roper Corp., George D.:

Steel Mill Lubricating Pumps\*, Jan 16 p 35

Roper, Daniel C .: Administration's Program for Industrial Reemployment, Apr 30 p 89

Rosa, Clarence H.: Wins First Prize in Bridge Design Contest\*, May 28 p 59

Roundupson Process: Vulcan Mold & Iron Co. to Make Ingot Molds by, June 25 p 93

Roxalin Flexible Lacquer Co.: Synthetic Enamel, May 21 p 42

Lufkin Mezurall, Mar 5 p 49

Rush, Clarence G .:

A Profitable Fire (Moderniza-tion Contest), Mar 12 p 32

last Furnace Plans and Prospects\*, Jan 30 p 28 o Erect Blast Furnaces, Open-Hearth Furnaces and Rolling Mills at Magnito-gorsk Steel Works, Feb 27 Blast

Rustless Iron & Steel Corp.: Quarterly Report, May 7 p 112

Ruth, Margaret R.:

At Crossroads of Business Life, May 28 p 48

Safety:

General Electric Record, Feb 6 p 61 Record in Aliquippa Plant of Jones & Laughlin Steel Corp., Jan 16 p 77

S

Salaries:

Analysis of Executive, Mar 12 p 54

Sand Molding:

For Cast Iron, May 14 p 74-D Performance at High Temper-ature, May 14 p 74-D Physical Properties of, May 14 p 74-D

Scherr Co., George:

Spline and Pinion Hobbers, Reinecker\*, May 7 p 51

Schneible Co., Claude B.:

Dust Collectors, Improved, Apr 9 p 95 Schwab, Charles W.:

Expresses Confidence in Fu-ture, Feb 20 p 84

Schwartz, Benjamin: Testimony at Basing Point Hearing, Mar 26 p 90

Midwest-Patterson Arc-Weld-ed Air-Powered\*, Mar 5 p 36 Scoville, John W.

Wages and Automobile Costs\*, Apr 16 p 45 Scrap:

Costs, by Districts, Jan 30 p 50 Exports, 1935\*, Jan 2 p 90 Exports by Six Leading Countries, 1934, Jan 30 p 54 Iron and Steel, Technical Importance of, May 28 p 34; June 18 p 62 Simplified Practice Revision, Mar 19 p 69

Mar 19 p 69 teel, Antimony in, Apr 23 Steel, Antimony in, Apr 23 p 43 Tin Plate Exports, Embargo Bill, Feb 6 p 56; Feb 20 p 96; Apr 9 p 66; Apr 16 p 64 Tin Plate Exports, Regula-tions for, June 25 p 85

Scrap Exporters:

Corporation to Be Formed, June 4 p 76 Screw Machines:

Brown & Sharpe Small Motor Driven\*, Mar 26 p 54 Wickman Small Automatic\*, June 4 p 54

Sebald, W. W.: Testimony in Basing Point Hearing, Mar 19 p 73

Security: Economic, Private Plans for, Jan 30 p 27

Security Act: Federal, How It Affects Wis-consin Manufacturers, Jan 23 p 23

Sefing and Surls:

Superheated Gray Iron, Apr 2 p 42

Seifert, Inc., E. R.: Wire Coil Winding Machine\*, May 7 p 49

Selling: Machine Tools, Apr 16 p 47; June 11 p 45 Rebuilt Products, Mar 5 p 40; Apr 16 p 47

Senate Munitions Committee: Hearing of Steel Executives, Feb 13 p 72

Ohio Magnetic Sheet\*, June 18

Shaft Machine:

Stow Flexible, with Swivel Mountings\*, Mar 5 p 52

Shapers:

Fellows Special Gear\*, Feb 27 p 47 hio, with Group Controls\*, May 7 p 48

Sharon Steel Hoop Co.:

Plans Reorganization, Jan 9 p 62; Mar 5 p 66

Sharpener:

Weldon End-Mill, Jan 30 p 40

Shaw, Ralph M., Jr.: Cast Iron, Origin of\*, Jan 30 p 24

Shearing Machine:

Bennie Rotary\*, May 21 p 41 Niagara Improved BL Power Squaring, June 25 p 75 United, for Strip Steel\*, June 25 p 69

Sheet Aluminum Corp.:

Aluminum Alloy row\*, May 21 p 44 Wheelbar-

Sheets, Steel:

Allegheny Large Polished Stainless Steel, Mar 19 p 52 And Strip Production, 1935, June 4 p 118 Armco Stabilized, May 28 p 58 Extras on Items, Jan 2 p 156 Insulated, for Houses, Feb 6 n 29

p 29 Ohio Magnetic Separator for\*,

June 18 p 49
Production, 10 Years, Compared with Finished Steel
Output, Jan 2 p 84
Quantity Differentials, Republic, Mar 12 p 113

Shipbuilding:

Construction, 1935, Feb 20 p 71; Apr 23 p 68 Oglebay, Norton & Co. Re-modeling Ore Freight Boat, Feb 20 p 63

Signaling System:

Youngstown Strip Mill\*, Apr 2 p 39

Signs:

Neon, with Stainless Steel Letters\*, May 21 p 45

Silicosis:

Labor Department's Cam-paign Against, May 14 p 66; June 4 p 67

New Alloy Steel, May 14 p 80 Silver Soldering, Jan 9 p 28

Simonds and Young:

Coloring of Metals—Copper and Brass\*, Apr 16 p 25; Iron and Steel, Mar 26 p 48; White Metals, June 18 p 30

Simonds, Herbert R.:

Metal Finishing, Developments 1935\*, Jan 2 p 553; Jan 9 p 44

Simplification:

Abrasive Grain Sizes, May 21 Abrasive Grain Sizes, May 24
p 62
Heating Boilers, June 25 p 86
Metal Lath, Mar 12 p 68; June
11 p 64
Range Boilers, Apr 2 p 62
Scrap Practice Revision, Mar
19 p 69
Steel Scrap, May 21 p 62
Tinned Steel Ice Cream Cans,
June 11 p 64
Wire Screens, Apr 9 p 64

SKF Industries, Inc.:

Batt, William L., President\*,
Feb 13 Insert

Skid Platform:

Truscon Steel Co\*, May 28 p 59

Slabs:

Alloy Steel, Quantity Extras, Mar 19 p 78

Smelting:

Japanese New Process for Ores and Metals, Apr 2 p 40

Smit & Sons, J. K .:

Water Cooled Diamond Hold-er\*, Feb 6 p 87

Smith Corp., A. O .:

Large Fractionating Equip-ment\*, Feb 6 p 43

Smith, Inc., Winfield H .: Speed Reducers, May 7 p 50

Society of Automotive Engineers:

Officers\*, Jan 23 p 51
Production Division and
American Welding Society
Joint Meeting, Jan 23 p 54
Production Meeting, Apr 30

Solder:

Soft, Physical Properties\*, Feb 27 p 30

Soldering:

Silver, Jan 9 p 28

Soler, Gilbert S .:

Electric Furnaces and Their Part in Metallurgical Prog-ress, June 4 p 35

South Africa: Dumping Duty on Pipe, Apr 9 p 66

South Bend Lathe Works: V-Belt Drive, Feb 27 p 46

Southern Supply and Machinery Distributers Association:

Convention Proceedings, May

Soviet Union:

(See Russia)

Import Surtaxes, June 18 p 60

Speed Reducers:

Smith Planetary, May 7 p 50

Spikes:

Rasmussen Railroad\*, May 28 p 58

Sprague, Dr. O. M .:

Testimony in Basing Point Hearing, Apr 2 p 64

Spray Gun:

Metallizing\*, Mar 12 p 61

Spraying:

Metal, Machine Elements\*, Apr 9 p 49; Apr 16 p 31

Spring Steel:

Extras on Cold Rolled, Apr 16 p 67

Combination Gear Drive and Pinion\*, Mar 12 p 60

Standing, A. J.:

Minimizing Hazards of Main-tenance, June 4 p 46

Stanley Works:

Reel Stand, Feb 6 p 40

Stapling Machine:

Paslode\*, Feb 6 p 43

Staplit Machine:

Tichenor Improved, Jan 16 p 37

Abrasion-Resisting, Jan 23 p

Advertising's Place in Mar-keting, May 28 p 46 Armco Stabilized, May 28 p 58 A u g e r, Successful Against Coal Dust Hazard, June 4 p 77 Average Life of May 28

Average Life of, May 28 p 51 Bought by Motion Picture Companies, 1935, Apr 9 p 85 Carbon Spring, Prices, Apr 9

Carbon Spring, Prices, Apr 9 p 93
Chromium Coated, Apr 2 p 42
Composite for Jails, Specifications, Mar 19 p 43
Construction in Flood Control, Apr 2 p 68
Distribution, 1935\*, Jan 2 p 53
Electric, Deoxidation of\*, Apr 23 p 37

Finished Production, 1935, May 7 p 92 For Housing, Progress in 1935, Jan 2 p 140 Gordon Metal Bonding Proc-ess\*, Apr 2 p 40 Ihrigized, Corrosion Resistant, May 21 p 41 In Dams, Greater Use Urged, Feb 13 p 51 Ingot Capacity, 1935, Mar 5 p 86 Ingot Production, 1935, Mar 5

Ingot Production, 1935, May 7 p 92

Ingots and Castings Produc-tion, World, 1935\*, Jan 2 p 98

tion, World, 1935\*, Jan 2
p 98
Ingots, Production December
and Year, Jan 9 p 65-D;
January, Feb 13 p 82; February, Mar 12 p 74; March,
Apr 9 p 95; April, May 14
p 74-F; May, June 11 p 106
In Present Use on Manhattan
Island, May 14 p 74-G
Lacquered, Corrosion Resistant, May 21 p 42
Making, Greater Accuracy in,
Jan 16 p 17
Market for Consumer Goods,
1935, Apr 9 p 86
Market for House Construction\*, Jan 2 p 64
Market Research Uncovers
New Uses and More Profits
for\*, May 28 p 27
Output Per Family, 1935, Feb
20 p 66
Per Capita Consumption, Apr
2 p 71

20 p 66 Per Capita Consumption, Apr 2 p 71

Per Capita Consumption, Apr 2 p 71
Progress and, May 28 p 22
Rapid Refining of, Jan 16 p 18
Sheet and Strip, Production, 1935, June 4 p 118
Smelting Process, New Japanese, Apr 2 p 40
Strip, Shearing at High Speed\*, June 25 p 69
Structural, Cold Forming of\*, Jan 2 p 442
Tool, Can It Be Merchandised?\* May 28 p 44
Tool, for Machining Stainless Steel, May 21 p 43
Tool, Gas Fired Furnaces for Forging\*, Jan 30 p 32
Tool, Prices Advanced, June 4 p 55
Trends in Metallurgy of Low-

p 95
Trends in Metallurgy of LowAlloy, High-Yield Strength
Structural, Feb 27 p 40
World Production, 1935°, Jan
2 p 98
World Production, United
States Share of, June 4 p 81

Steel Co. of Canada:

Booklet, 25th Milestone, May 28 p 76

Steel Founders Society of America:

Officers, Feb 20 p 66

Steel Industry:

teel Industry:
British Progress, Mar 12 p 41
Cost of Research Program,
May 14 p 74
Drive to Unionize, Feb 27 p
64; Apr 23 p 62; May 21 p 62;
June 4 p 74; June 18 p 58;
June 25 p 92
Earnings, 1935, May 14 p 75
Employment, 1935, May 14 p
76

The state of the s

p 48 Job Cost, Feb 20 p 69 Labor Relations in, June 4 p

Other Industries, Apr 2 p 69 Problems Confronting, June 4

Problems Confronting, June 4 p 29
Products for Sale in Fourth Quarter and Year 1935, Feb 20 p 70
Sound Commercial Policy for Steel Makers, June 4 p 30
Taxes, 1935, May 14 p 70;
June 4 p 55
Taylor, Myron C., Foresees Brighter Future for, June 11 p 48

Steel, Rustless:

(See also Steel, Stainless)

Steel, Rustless:

Production, 1935\*, Apr 23 p 22

Steel, Stainless:

(See also Steel, Rustless)
Cor Ten in Construction of
Cars for B. & L. E. Cars,
Feb 20 p 68
For Construction, Mar 12 p 86
In Kitchens of Queen Mary\*,
Apr 2 p 43
Railroad Trains in England,
Feb 20 p 84 Feb 20 p 84 Tool Steel for Machining, May 21 p 43

Steever, Adam M .:

Convection Heating, Jan 16 p 20 Stewart Iron Works Co.:

50th Anniversary, Feb 13 p 59 Stillman Co., M. J.:

Tymeter, Timing Instrument\*, May 7 p 48

Stilwell, C. S.:

ow Canadian Treaty Affect Machinery, Jan How p 61

Stoker Unit Corp.:

Boring Machine with Platen Mounted Units\*, Mar 26 p 57

Stone, Charles F.:

Testimony in Basing Point Hearing, Mar 19 p 74 Stone, M .:

Controlling Roll Pressure, Apr 30 p 46

Stopehamer:

Ingersoll-Rand Self-Rotated\*, June 4 p 55 Stout Flour Mill:

Labor Union Case Decision, Jan 23 p 47 Stow Mfg. Co.:

Flexible Shaft Machine w Swivel Mountings\*, Mar p 52 Straightening Machine:

Lewis Automatic Cut-Off and\*, May 7 p 46 Medart Continuous Automatic Polishing and\*, Feb 20 p 50

Strand & Co., N. A.: Flexible Shaft Equipment\*, Mar 19 p 61

Strike! Apr 2 p 32

Stromberg Electric Co.: No. 15 Time Recorder Clock\*, Jan 16 p 36

Structo, Inc.: Steel Houses. Prefabricated May 7 p 39

Sugar Institute, Inc.:

Anti-Trust Law Decision Being Studied, Apr 2 p 63 Sundstrand Machine Tool Co.:

Hydraulic Pump, Valve and Circuit\*, Jan 23 p 34

Sun Shipbuilding Co.: Streamlined Steel Automobile Ferry, June 18 p 71

Superior Steel Co.:

Quarterly Report, May 7 p 112 Surls and Sefing:

Superheated Gray Iron, Apr 2

Surpluses: Corporate, and Depreciation, May 7 p 30

Suslov, B. M .: Blast Furnace Pla U.S.S.R.\*, Jan 30 p 28 Plans in

Swinden, T.:

Metallurgical Achievements in 1935, Jan 16 p 20

Swiss-A Duty

Switcht Gener Feb switche Bull n 5

p 5 General Ma Produ p 5 Switch Gene Swoboo

Muffl

Sympos

Meta 16

Tables

Ame

Tabor Abra Ma Mold Talbot Shea Sp

Tantal

Fans

Tariff: Cana ica uc Sout Swis Di Taxes

And W Colle tic Ja Corr Corp Corp Corp Cor

Exc T Fue Pay Pre 62 Spa ta Stee P Wh

Taylo Cen Taylo

See S J Taylo Fal Swiss-American Reciprocal Tariff:

Duty Reductions, Jan 16 p 45

Switchboards:

General Electric Streamlined, Feb 27 p 44

switches:

3 p 22

2 p 86 Mary\*,

gland,

, May

an 16

3 p 59

ment\*.

Will 11.11

Platen 26 p 57

Point

e, Apr

ated\*,

cision,

with Mar 5

ut-Off

nent\*,

"lock".

ouse\*.

n Be-

e and

mobile

p 112

Apr 2

iation,

ns in

nts in

Co.:

Bull Dog Vacu-Break\*, Mar 5 p 50 General Electric, Feb 27 p 44: Mar 5 p 53 Production Compact\*, June 4 p 55

switchgears:

General Electric Metalclad, Feb 27 p 44

Swoboda, Inc., H. O.: Muffle Furnace, High Temper-ature\*, June 25 p 75

Symposium: Metallurgical Progress\*, Jan 16 p 14

T

American Rotary for Blast Cleaning\*, Mar 5 p 52

Tabor Mfg. Co.:

Abrasive Cut-Off Machine\*, Mar 19 p 61 Molding Machines, Improved, Feb 27 p 49

Talbot, H. H.:

Shearing Strip at High Speed\*, June 25 p 69

Tantalum:

Fansteel Booklet on, Feb 6 p 92

Tariff:

Canadian Reductions on American Iron and Steel Products, May 14 p 64
South African Dumping Duty on Pipe, Apr 9 p 66
Swiss - American Reciprocal, Duty Reductions, Jan 16

And Industrial Conditions in Wisconsin\*, Mar 26 p 32 Collections, Ratio of, to National Income, 1932 to 1934, Jan 9 p 63 Corporation Surpluses and Depreciation, May 7 p 30 Corporate Surpluses, National Industrial Board Criticizes, Apr 2 p 106 Corporation Surpluses, Senate Passes Bill, June 11 p 64 Corporation Surpluses, Testimony Against, May 14 p 67 Corporation, Testimony of Clyde Conley, Apr 9 p 63 Corporation Surpluses, John W. O'Leary Condemas Bill, May 7 p 64 Exchange Surtax Handicaps Trade with Argentina, Apr 30 p 60 Fuel Oil, Proposed Pennsylvania, May 28 p 72 Payroll, How to Cut, Feb 6 p 24 President's Program, Mar 5 pp

President's Program, Mar 5 pp

President's Program, Mar 5 pp. 62, 99
Spain Imposes Import Surtaxes, June 18 p 60
Steel Industry, 1935, May 14 p 70; June 4 p 55
Wheeling Steel Corp. Loses Case, May 21 p 63

Taylor & Fenn Co.:

Century of Machine Tools, Feb 13 p 44

Taylor, Myron C .:

Sees Further Recovery for Steel Industry, Jan 2 p 150; June 11 p 49

Taylor-Winfield Corp.: Fabricating Welding Di-vision\*, May 21 p 48

Teetor, R. R.:

President, Society of Automo-tive Engineers\*, Jan 23 p 51

Telescopes:

Welding Large\*, Feb 6 p 20

Tennessee Coal, Iron & Railroad Co.:

Acquires Virginia Bridge & Iron Co., Jan 30 p 55

Test Bars:

Casting, Method of Bureau of Standards, Feb 6 p 55

Testing Device:

Acme Electric Dielectric, Feb 20 p 50

Testing Machines:

Fellows Gear and Worm\*, June 25 p 72 Michigan Gear\*, June 4 p 52

Correlation Between Metallog-raphy and Mechanical (Howe Memorial Lecture)\*, Feb 27 p 26 For Prison Bars, May 21 p 62 Useless Methods Criticized by Dr. John Johnston, Apr 16 p 68

p 68 Yoloy, Nickel-Copper Ste Trolley Rail\*, Feb 20 p 62

Thomson, Elihu:

Resistance Welding, 50th An-niversary, May 28 p 50

Thomson-Gibb Electric Welding

Press Welder\*, June 4 p 52

Thread Grinder:

Ex-Cell-O Automatic Precision\*, June 4 p 51

Threading Machines:
Landis Double End Threading
Fixture\*, Apr 23 p 51
Landis, for Tightening DrillPipe Joints\*, Feb 6 p 42

Thermometer:

Brown Recording, with New Bulb Position\*, Apr 2 p 52

Thum, E. E.:

Stainless Steels for Construc-tion, Mar 12 p 86

Tichener & Co., E. H .: Staplit Machine, Jan 16 p 37

Timken Steel & Tube Co.: Silmo, New Alloy Steel, May 14 p 80

Timing Instrument:

Stillman Tymeter\*, May 7 p 48

Federal Trade Commission Issues Complaint Against Makers, Mar 26 p 72
Federal Trade Commission Issues Consent Decree Against 15 Makers, June 25 p 128
Scrap Exports Embargo, Feb 6 p 56; Feb 20 p 96; Apr 9 p 66; Apr 16 p 64
Scrap Exports, Regulations for, June 25 p 85
Spanish Imports, Apr 9 p 84

Toledo Machine & Tool Co.: Automatic Multiple-Slide Press\*, Jan 23 p 32

Toledo Vocational High School: Vocational Training, Feb 20 p 28-A

Toolmaking:

Modern Machine Tools for\*, Feb 13 p 36

Independent Improved able Electric, Apr 16 p 49
Michigan Pitco Pin Splice Turning\*, Feb 6 p 40
Small, Developments\*, Jan 2 p 277; Jan 9 p 10

Welding, with Thumb Lever Control\*, Jan 16 p 36

Tour, Sam:

New Alloys and New Proc-esses in 1935, Jan 16 p 21

Tower, W. S.:

American Iron and Steel In-stitute Activities, June 4

stitute Activities, p 49
Address at Convention of Iron, Steel and Allied Industries of California, Feb 13 p 78
Employment and Wages in Iron and Steel Industry, Jan 2 p 142
Testimony in Basing Point Hearing, Mar 26 p 74

Townsend Plan, Feb 6 p 57

Trade Agreements:

Attacked by W. A. Irvin, Jan 16 p 46 Constitutionality to Be Tested, Jan 23 p 45 Franco-American, May 14 p 81 Swiss - American Reciprocal Tariff, Jan 16 p 45

Trailer:

Mullins Streamlined\*, June 11 p 57

Transformers: Mercury Vapor Lamp Auxiliary, Jan 16 p 34

Transmission Cases: Machining for Bulck Model 40 Car\*, May 7 p 32

Transmissions:

Oilgear Simplified Variable Speed\*, Mar 26 p 55 Progress in Mechanical Power, Jan 2 p 361; Jan 9 p 30

Trimming Machines:

Quickwork Stamping\*, Jan 16

Trucks:

Elwell-Parker for Handling Cold Strip Coils\*, Apr 16 p 43

p 43
Hanscom Bakery Stainless
Steel Delivery\*, Apr 2 p 47
Mercury High-Lift Industrial\*,
Mar 12 p 124
White, Chassis Assembly Line,
Mar 19 p 28

Truscon Steel Co.:

Production of Parts for Cros-ley Refrigerator Cabinets\*, June 11 p 34 Quarterly Report, May 28 p 71 Skid Platform\*, May 28 p 59

Tumbling Equipment:

Ransohoff for Foundry Clean-ing\*, Apr 30 p 36

Tungsten Carbide Tool Co.: Lathe Centers, Tungsten Car-bide Tipped, Jan 30 p 41

Udylite Co.:

New Plating Equipment\*, June 4 p 53

United Engineering & Foundry Co.:

Annual Meeting, May 7 p 112
Bonus Plan, Apr 16 p 70
Operating Plant at Wooster,
Ohio, Feb 13 p 83
Pressuremeter, May 28 p 59
Shearing Strip Steel at High
Speed\*, June 25 p 69

United States Electrical Tool Co.:

Floor Grinder, Model 65\*, June 4 p 54

United States Steel Corp.:

Annual Meeting, Apr 9 p 94
Annual Report, Mar 19 p 76-B
Austin, H. L., Assistant to
Chairman Finance Committee\*, Jan 23 p 54
Entertains British Steel Masters, June 11 p 73

Exhibit, Coal Mine Entry\*, May 21 p 44 Hughes, John, Retires as As-sistant to President\*, Feb

Sistant of President, Feb. 6 p. 63
MacDonald, J. Carlisle, to Direct Public Relations Work, June 4 p. 78
Program for Recruiting and Training Employees, Jan 2 p. 149
Outstock Report, Jan. 30 p.

Training Employees, Jan 2 p 149
Quarterly Report, Jan 30 p 55; Apr 30 p 83
Shipments, December, Jan 16 p 49; January, Feb 13 p 83; February, Mar 12 p 95; March, Apr 16 p 72; April, May 14 p 74-F; May June 18 p 89
U. S. Steel News, Employee Magazine\*, June 4 p 85
Vogt, A. W., Comptroller\*, Jan. 23 p 54

Used Products:

Selling. Mar 5 p 40

U. S. Tool Co.:

Milling Machine, Semi-Auto-matic or Hand Operated, Apr 16 p 49

Vail, B. J.: Development of Proferall Cast Camshafts, Apr 30 p 47

Valvactor:

Foxboro Vernier, Feb 27 p 45

Valves:

Hancock Globe\*, Mar 26 p 56
Hannifin Packless Manifold
Air Control, May 7 p 51
Ingersoll-Rand Compressor\*,
Mar 26 p 56
Mahr Oll Regulating, Feb 6
p 44

Vanadium-Alloys Steel Co.:

Tantalum Carbide Tools\*, June 18 p 43 Van Alstyne, G.: Oxyacetylene Flame in Manufacture of Airplane Struts, Feb 6 p 56

Van Denburgh, O. A.: Burden Water Wheel, Histori-cal\*, Mar 26 p 38

Van Deventer, John H.: American Spirit Proves It-self by Performance, Jan 2 p 37 Constitutions, Little and Big, June 18 p 25 Do You Enjoy Having Your Shins Kicked?, Mar 5 p 27 Fertile Years of Accomplish-ment, June 25 p 21 Fool-Proof Machine, May 14 p 31

Fool-Proof Machine, May 14 p 31 Great Un-American Wire Tapping Plot, Mar 19 p 27 Horse and Buggy, or 16 Cylinder?, May 21 p 33 Keep the Hogs Out of the Corn Crib, Mar 12 p 29 Let's Examine the Record, Feb 6 p 19 Mechanization, More About, June 11 p 29 More Flies with Sugar, Jan 16 p 13 Niagara of Molten Metal, Apr

p 13
Niagara of Molten Metal, Apr 30 p 17
No Politics in These Projects, Mar 26 p 31
Political Preference, 10 Modern precepts for, Jan 23 p 11
Prepare for Flood Control, Apr 9 p 25
Rule by Majority, Feb 20 p 21
Rulers of Steel May 28 p 21

21
Rulers of Steel, May 28 p 21
Smile, Darn You, Smile! Apr
2 p 25
To Sharpen an Axe You Need
a Grindstone, June 4 p 25
Wall Street and Main Street,
Feb 13 p 33
We Bow to the Postman, Jan
9 p 9

we bow to the Postman, Jan 9 p 9 Webster Had a Word for It, Jan 30 p 19 With Malice Toward None, Apr 23 p 21

Van Norman Machine Co.:

Piston Grinding Machine\*, Feb

Verity, George M.:

Middletown Pays Tribute to, June 11 p 71; June 18 p 44\*

Vierow, Emil:

ew Development in Open-Hearth Furnaces, Apr 23 p

Virginia Bridge & Iron Co.:

Acquired by Tennessee Coal, Iron & Railroad Co., Jan 30 p 55

Vise:

Arnott, Thomas, Hydraulic Bench, Patent, Jan 30, p 43 Covel Universal, Mar 5 p 53

Voges, Herman, Jr.:

President Albra Corp., Mar 5 p 68

Vogt. A. W.:

Comptroller, United States Steel Corp.\*, Jan 23 p 54

Vulcan Mold & Iron Co.:

o Use Roundupson Process for Making Ingot Molds. June 25 p 93

Wages:

(See Labor)

Waite, L. M.:

Vaite, L. M.:

Casting Gray Iron Under Pressure in Metal Molds\*, Apr. 30 p 30

Internal Cleaning of Closed-End Bottle-Neck Parts\*, Mar 19 p 38

Production of Synthetic Resin Parts\*, Apr. 9 p 34

Machine Tool Selling, June 11 p 45

p 45 What Is Behind Machine Tool Improvement? Mar 12 p 42

Walker, George A .:

Diemakers—Why Penalize Ex-perience? Mar 5 p 39 Shall We Quit or Modernize? (Prize Contest), Feb 20 p 34

Wall Unit:

Laminated Shim Stock Dispensing\*, Jan 23 p 35

What It Means to Business, Jan 23 p 29

Warner & Swasey Co.:

ew Machine Tool Installa-tions\*, May 14 p 32

Waterways:

Proposed Lake Erie and Ohio River Canal, Apr 30 p 104

Water Wheel:

In Original Works of Burden Iron Co.\*, Mar 26 p 38

Weidlein, Dr. Edward R.:

Urges Builders to Work with Scientists, May 14 p 72

Weir, E. T .:

Politics Threaten Recovery, Jan 2 p 156 Sound Commercial Policy for Steel Makers, June 4 p 30

Weirton Steel Co.:

Vacation Plan, June 4 p 78

Weisselberg, Arnold:

Electro-Galvanizing of Round Wire\*, May 21 p 34

Welding:

Alloy Steels\*, Jan 30 p 20; Feb 13 p 52 Aluminum, Advances in\*, Mar

Aluminum, Advances in\*, Mar 19 p 46
And Casting Designs, Developments, Jan 16 p 16
And Torch Cutting Tools and Machine Parts\*, Jan 16 p 28
Arc, Midwest-Patterson Air-Powered Scoop\*, Mar 5 p 36
Braze, Broken Shaft of Large Rock Crusher\*, Apr 2 p 36
Chemistry of, Jan 23 p 54
Copper Alloys\*, Feb 20 p 40
Costs, Effects of Generator Characteristics on\*, Jan 23 p 20

p 20
Developments in\*, Jan 2 p
496; Jan 9 p 24
Fabricating, Taylor-Winfield
New Division\*, May 21 p 48
L o w - A 11 o y High-Tensile
Steels\*, Apr 23 p 36
Rails, Long Length, Jan 2 p
502

502 Resistance, 50th Anniversary, May 28 p 50 Resistance Applications, Apr

2 p 66 Spot, Fundamentals of, Jan 23 p 54

Telescopes, Large\*, Feb 6 p 20

Welding Machines:

Federal Seam, with Track Mounted Fixtures\*, Feb 20 P 47 Federal Small Flash\*, Feb 27 p 48 Harnischfeger, for Increased Thickness Range, Apr 2 p 50 Hercules, with Portable Power Take Off\*, Feb 6 p 42 Thomson-Gibb Press\*, June 4 p 52

Welding Positioner:

Harnischfeger Tilting Turn-table, Mar 26 p 57

Welding Research Committee:

Engineering Foundation, Re-organized, Apr 9 p 79

Welding Rods:

Developments in\*, Jan 2 p 506

Weldit Acetylene Co.:

Welding Torch, Thumb Lever Control\*, Jan 16 p 36

Weldon Tool Co.:

End-Mill Sharpener, Jan 30

Welfare Building:

Bethlehem Steel Co.'s New\*, Feb 6 p 49

Wellman Engineering Co.:

Welding Large Telescopes\*, Feb 6 p 20

Westbrook, Francis A .:

Classifying Castings for Dispatch to Machine Shop\*, Jan 23 p 12

Western Pennsylvania Indus-trial Conference:

Annual Meeting, June 18 p 43

Westinghouse Electric & Mfg.

50th Anniversary\*, Jan 9 p 48; Golden Jubilee, Special 48 Page Insert Describing a Number of Company Works\*,

June 25 Annual Report, Mar 19 p 105-B

105-B Motors, New Line, SK Type, May 14 p 74-E Signaling System for Strip Mill\*, Apr 2 p 39 Wage and Salary Plan Ex-tended, May 21 p 72

Westinghouse Air Brake Co.: Quarterly Report, May 7 p 112

Westinghouse, George\*, June 25, Insert

West Leechburg Steel Co.:

Merger Planned with Alle-gheny Steel Co., Apr 30 p 64; May 28 p 55; June 4 p 90

Wetherill Engineering Co.:

Casting Gray Iron Under Pr sure in Metal Molds\*, 30 p 30 Cast Iron Die Casting Devel-opments, Feb 20 p 48 30

Weymouth, F. E .:

Steel and Reinforcing Tonnage Requirements for Southern California Water Job, Jan 30 p 76

Wheelabrator:

American, Blast Clear Equipment, June 18 p 46

Aluminum Alloy\*, May 21 p 44

Wheeling Corrugating Co.:

Expansion Joint for Concrete Pavements, Feb 6 p 62

Wheeling Steel Corp.:

Annual Report, Mar 19 p 105-B Loses Tax Case, May 21 p 63

Wheels:

Feed Worm, Machining\*, Apr 9 p 31

White Motor Co.: Chassis Assembly Line\*, Mar 19 p 28

Whitney Chain & Mfg. Co.: Silent Chain Conveyor Belt\*, June 4 p 55

Wickes Brothers: Crankshaft Lathe\*, Apr 16 p 52

Wickman, Ltd., A. C .: Small Automatic Screechines\*, June 4 p 54 Screw Ma-

Wickwire Spencer Steel Co.: Reorganization Plan, Mar 5

Republic Steel Corp. Not Acquiring, Mar 12 p 77

Widia Metal: Importation Discontinued, May 21 p 70

Williams, Clyde E .: High-Strength Low-Alloy Steels, Jan 16 p 22 Iron and Steel Scrap, Techni-cal Importance\*, May 28 p 34; June 18 p 62

Williams, D. A .: Testimony in Basing Point Hearing, Mar 19 p 75

Williams, White & Co.:

Osterholm Special Horizontal Grinders\*, Apr 16 p 51

Winding Machines:

Seifert Wire Coil\*, May 7 p 49

Electro - Galvanizing Round\*, May 21 p 34 Steel, Bethanized Process for Coating with Zinc\*, Apr 23

Wire Forming Machine:

Economy Automatic\*, Apr 2

Wire Screens: Simplification, Apr 9 p 64

Wisconsin, State of:

Taxes and Industrial Conditions in\*, Mar 26 p 32

Wolcott, Robert W .:

Testimony at Hearing on Pro-posed Pennsylvania Fuel Oil Tax, May 28 p 72

Worcester Art Museum:

Art of Machine Age Exhibi-tion, May 21 p 93

Worcester Pressed Steel Co.: Industrial Museum\*, Apr p 26

Worm Gears:

Contact, Comparative Study of\*, Mar 5 p 44

Machining in Bullard Plant\*, Apr 9 p 31

Wrenches:

Cleveland Holder for\*, Mar 26 p 54

Wright and Friend:

Butane-Electric Switching Lo-comotive\*, Mar 12 p 53

X-Ray Equipment:

General Electric Portable for Heavy Units\*, Apr 2 p 50

In Casting Exploration\*, Apr 30 p 33 Procedure at Naval Gun Fac-tory, Jan 16 p 18

Yoder Co.:

Automatic Cut-Off Machine, Mar 19 p 60 Edge Conditioning Machine, Jan 23 p 36

York Ice Machinery Corp.:

Air Conditioning Units, Jan 30 p 42

Young and Simonds: Coloring of Metals — Copp and Brass\*, Apr 16 p Iron and Steel, Mar 26 p White Metals, June 18 p

Youngstown Sheet & Tube Co.

Annual Report, Feb 13 p 89, Apr 2 p 65; Quarterly Re-port, Apr 23 p 70 Handling Cold Strip Coils a Campbell Works\*, Apr 1 p 43 Orders Two 4-High Mills, Ma 28 p 83 Plans Refunding Bonds Ma

28 p 83
Plans Refunding Bonds, Ma 5 p 68; Apr 9 p 56
Signaling System for Stra Mills\*, Apr 2 p 39
To Increase Tin Plate Capacity, Apr 30 p 88

Z

Zeh & Hahnemann Co.:

Punch Press for Light Pressure\*, May 21 p 51

Zeiser and Corson:

Beryllium and Beryllium A loys\*, Mar 5 p 28

Exhibi-

Co.; Apr 2

Study

Plants,

Mar 26

ing Lo-

ble for p 50 n\*, Apr in Fac-

chine\*

.: s. Jan

Copper p 25.66 p 48.18 p 3.66 Co.3 p 80.61 P Re-Coils a Apr 1 ls, May s, Ma Strice Capace

ım A